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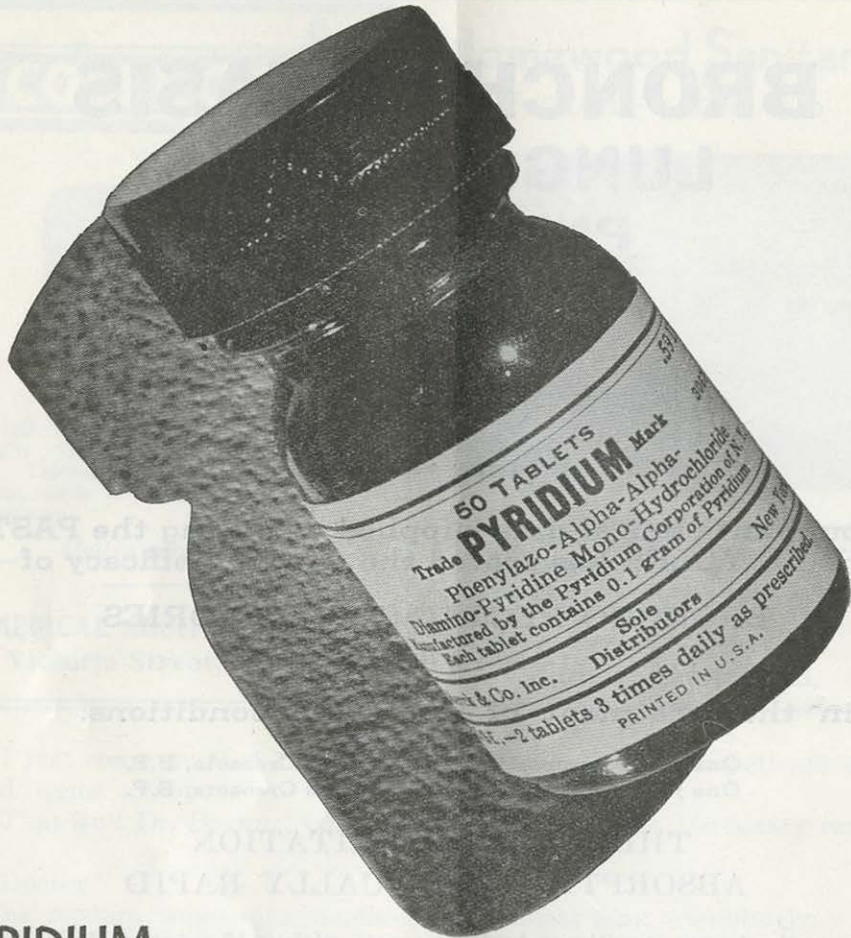
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# The Effect of Labour on the Uterus

W. G. COLWELL, M.D.

THE aim of every pregnancy is a live baby, and the mother in as good a physical condition as she was, before becoming pregnant. This study was undertaken to determine how many of one hundred primiparous women were in as good physical condition after labor, as before, and to determine what damage, if any, pregnancy, and particularly labor had upon the uterus.

All of these women received adequate antenatal care. They were confined in the Grace Maternity Hospital, the majority under supervision of one of the Attending Staff. All of them were examined at six weeks post partum, and in addition, twenty-six, who happened to be confined while Dr. Atlee was on service, were examined on discharge from hospital.

With regard to laceration of the cervix, all the cervixes at post natal examination showed some degree of laceration. The cases reported as lacerated, are more than just a mild splitting bilaterally of the cervix, which we always see after labor. It may be mentioned that the infections often seen post partum and which take the form of an erosion of the cervix, are the result of infection following laceration, and to the bruising effect upon the dilating cervix of the descent and partial rotation of the presenting part during the first, and the beginning of the second stage of labor.

Tables 1 and 2 show the condition of the cervix in all the women, ante partum, in twenty-six instances at ten days post partum, and in 94 normal ante partum cases at six weeks following delivery. The post partum examination shows the number of normal, eroded, lacerated, and both lacerated and eroded cervixes.

TABLE 1  
10 days post partum

Ante Partum		Post Partum (26)			
Normal	Eroded	Normal	Eroded	Lacerated	Lacerated and Eroded
94	6 (3 G.C.)	11	8	4	3

TABLE 2  
6 weeks post partum

Normal	Eroded	Lacerated	Lacerated and Eroded	Total
46	29	12	7	94

It will be seen from Table 2 that of 94 normal ante partum cervixes 51% were damaged by labor; of those damaged 60% showed erosion, 25% definite

laceration, and 15% both laceration and erosion. Of the eight cases of erosion at ten days post partum, four of them had disappeared at six weeks, one, which had been badly eroded at ten days, showed only a slight erosion at six weeks, and three remained the same.

Two of the cases that were eroded ante partum showed no erosion at the six weeks examination, the other four were still eroded

Table 3 shows the method of delivery and the lacerations of the cervix associated with each.

TABLE 3

		Lacerations of Cervix	Percentage
Normal Spontaneous.....	86	15	17.44
Breech.....	1	1	} 28
Low Forceps.....	9	1	
Mid Forceps.....	4	2	
Total.....	100	19	

Table 4 shows the condition of the uterus post partum, at ten days and at six weeks.

TABLE 4

	10 days	6 weeks
	Number	Number
Normal size and position.....	15	59
Normal Position, Large Size.....	7	0
Normal Position, Medium Size.....	2	3
Abnormal Position, Medium Size.....	1	11
Abnormal Position, Normal Size.....	1	27

It will be seen from this table, that at six weeks, 14% of the cases showed some degree of subinvolution and that 38% were in an abnormal position. Of the eleven cases which were abnormal at ten days post partum, five were normal at six weeks; three showed sub-involution, and three, abnormal position.

The treatment of these abnormalities resulting from labor is as follows:

At ten days post partum all abnormally placed uteri are placed in their normal position when this is able to be effected. The erosions that exist at this time are not treated, but patients are referred to the Dalhousie Public Health Clinic for their final post partum examination at six weeks. In passing it may be noted here that only about 25% of these patients show up for their six weeks examination despite our efforts to date. This applies to all our clinic cases, as well as those who happen to be confined in Dr. Atlee's service. All clinic patients are instructed to return at six weeks for a check-up.



We feel, however, that better results can be obtained and we are exerting more effort to accomplish this desirable end.

At the six week's examination, a complete pelvic examination is done and where an eroded cervix is discovered, if the erosion is slight, the patient is advised to douche daily, with lysol half drachm to a quart, and that is usually sufficient to clear up the erosion. I say that, because we have found that in cases where the cervix is badly eroded at this time, the patient is given the same advice, but is also instructed to return in one week, at which time she is again examined, and in many instances there is such an improvement that we feel justified in treating the slight erosions by simple douching. In the bad cases, the week's douching is for cleansing purposes and the cervix at the next visit is cauterized by means of the actual cautery, the eroded area being burned by radial streaks from the external os. In rare cases the cervical canal is also cauterized.

Those cases with an erosion and a positive smear for the gonococcus are cauterised and sent to the genito-urinary department for treatment of the infection.

In cases which have an abnormally placed uterus, usually retroversion and retroflexion, an attempt is made to replace the uterus bimanually. If this fails, the patient is instructed in the assuming of the knee-chest position, which is to be done twice daily for two weeks. To be frank, this is all that is done as a rule, because in most cases, particularly in those who have had numerous children, a misplaced uterus which is not causing any discomfort, is, perhaps, a way to prevent conception. Where, however, the displacement is causing symptoms, and in our experience it seldom does, the patient returns and if no improvement is noted, and further attempts at replacement are unsuccessful, she is referred to hospital.

The conclusions one can draw from this study are, as follows:—

1. A large percentage of cervixes are damaged by laceration, bruising and infection. These damaged cervixes if not attended to, can, and will, lead to chronic infection with its attendant symptoms of eucorrhoea, backache, and often pain in the lower abdomen. Treatment to a chronically infected cervix will cause these symptoms to disappear, but it is much better to prevent their occurrence by treating the infected cervix when it is discovered post partum.

It is, of course, much better to prevent the occurrence of the infection, and I am convinced that this can be done in practically all cases if the treatment, that of vaginal instillations of one ounce half strength Dakin's solution by means of a catheter is given twice daily to the post partum patient. It has worked so in my private practice. This procedure, which is carried out while the patient is in hospital, is continued by the patient in the form of low pressure douches once daily at home, usually using half a drachm of lysol to a quart of warm water, until she comes for post partum examination.

In a series of seventy primiparae in my own practice, erosion was found to be present in two instances at the six weeks examination, a percentage of 2.9. All of these women received the aforementioned treatment while in the hospital, and on returning home.

2. A fairly large percentage of abnormally placed uteri is found at six weeks post partum. The vast majority of these are not causing any symptoms and are not actively treated unless they do.

In conclusion, a plea is made for the treatment of these infected cervixes to relieve the symptoms they may be causing, but more so to prevent the ill-health they are bound to cause sooner or later.



# Some Common Conditions of the Ano-Rectal Region\*

W. ALAN CURRY, B.A., M.D., F.R.C.S. (Eng.) & (Can.)

IN order to diagnose and treat disorders of this region it is essential to have a knowledge of the surgical anatomy. The anal canal is about one and a quarter inches in length. The junction of the anal canal and rectum is the pectinate line. The mucous membrane of the lower inch of the rectum is marked by the presence of longitudinal folds. They are called the columns of Morgagni. The bases of these folds form small depressions, which are called the anal valves or sinuses of Morgagni. The pectinate line is at the line of the anal valves. This is the narrowest part of the anal canal and most liable to injury from the passage of a hardened stool. It is the area where infection most commonly starts to cause an ischio rectal abscess and subsequently a fistula in ano. The anal canal is lined with squamous epithelium and is richly supplied with sensory nerves. Consequently lesions of the anus are very painful. The rectal mucosa is lined by columnar epithelium and is supplied by the sympathetic. Lesions of the rectal mucosa are comparatively insensitive.

The anatomy of the external sphincter muscle has been neglected in the majority of the standard works. It is described as a circular muscle, arising from the tip of the coccyx and inserted into the central point of the perineum. Recently the external sphincter has been shown to consist of a trilaminated muscle. The most superficial part is immediately beneath the skin and is called the subcutaneous sphincter. It may be easily palpated and is one quarter inch in width. This portion of the external sphincter has not any origin from the coccyx. The deeper layers of the external sphincter unite with the internal sphincter, pubo rectalis fibres of the levator ani, and the longitudinal muscle of the anal canal, to form the vital ano-muscular ring, on which continence of the bowel entirely depends. With the finger inserted in the anal canal, a well marked depression, one eighth inch wide, may be palpated extending around the lumen. It is caused by the attachment of the longitudinal muscle to the anal lining. The depression is called the ano-intermuscular septum. It intervenes between the lower margin of the ano-muscular ring and the subcutaneous sphincter. This is a very important land mark, because the great majority of internal openings of fistulae occur here. Fissure in ano overlies the intermuscular septum. The subcutaneous sphincter may be divided safely in any direction, without causing incontinence. With the finger in the anal canal, above the ano-intermuscular septum, the composite muscular ring can be palpated, on which continence entirely depends. The fibres of the pubo rectals may be plainly felt laterally as a well defined ridge. As they are traced forwards, it will be evident that they do not support the anal canal anteriorly, but extend forwards, to their origin from the posterior aspect of the symphysis pubis.

\*Read before the Ontario Medical Association, Toronto, May, 1928.



A careful history should be taken. Much help will be obtained by analysis of the symptoms.

(1) *Bleeding*—painless bleeding of a bright red colour is characteristic of internal haemorrhoids. Passage of tarry stools is suspicious of a lesion high up in the gastro-intestinal tract, e.g. euodenal ulcer. Blood stained mucus is suggestive of carcinoma of the rectum. Slight bleeding associated with severe pain at stool is found with fissure in ano.

(2) *Pain*—severe smarting pain occurring during the passage of a stool and lasting for several hours afterwards is characteristic of fissure in ano. Constant localized discomfort over a sudden swelling at the anal opening is found in thrombosed external haemorrhoids. A sensation of incomplete bowel movement, associated with tenesmus is found in carcinoma of the ampulla. Uncomplicated haemorrhoids do not cause pain.

(3) *Protrusion*—soft, painless and reducible protrusions, occurring at stool are usually due to internal haemorrhoids. Sudden, painful and irreducible protrusion is due to a thrombosed external haemorrhoid.

(4) *Abnormal Evacuation of Bowels*—increased frequency of bowel movements, associated with blood and mucus, are characteristic of carcinoma or ulcerative colitis. Recently developing and increasing constipation in middle age is a suspicious symptom of carcinoma at the recto-sigmoid junction.

A thorough examination of the patient must be carried out. It is well to remember that seventy per cent of patients suffering from carcinoma of the rectum have been treated or operated upon for haemorrhoids before the malignancy was discovered. The knee chest position should be used. The external skin is first carefully inspected for the openings of fistulae. Swelling and redness indicate an abscess. Dermatitis of the skin may be present, resulting from pruritus ani. In the mid line over the coccyx, the skin should be examined for a small depression, which would indicate a pilonidal cyst. Remember that if a fissure in ano is present, it will cause agonizing pain to insert a finger in the anal canal. Haemorrhoids are not palpable, unless some complication such as thrombosis is present. The rectal wall should be systematically palpated to exclude a carcinoma. A short proctoscope is now passed beyond the ano-muscular ring. On removing the obturator, air will distend the rectum. The speculum is now slowly withdrawn and if internal haemorrhoids are present, they will bulge into the lumen as red vascular swellings, at the ano-rectal junction. The region of the ano-intermuscular septum should be carefully examined for the presence of fistulous openings or infection of the anal crypts. As a final procedure, it should be made part of the routine examination, to pass a sigmoidoscope to the recto sigmoid junction and beyond, in order to rule out a high carcinoma of the rectum, which cannot be felt with the finger.

### Haemorrhoids

There are two distinct types of haemorrhoids, internal and external. The internal haemorrhoidal plexus of veins lies under the last inch of the rectal mucosa and upper part of the anal canal. There are three primary internal haemorrhoids at three, seven and eleven o'clock. The reason that there are two on the right and one on the left side, is that the superior haemorrhoidal artery divides into right and left terminal branches. The right further divides into anterior and posterior divisions. Secondary haemorrhoids are



present in some cases. The internal haemorrhoidal plexus of veins is in direct communication with the portal system. The veins are devoid of valves, so that back pressure is very liable to cause a varicose condition. The external haemorrhoidal plexus lies under the anal skin and below the ano-intermuscular septum. It communicates with the systemic circulation as well as the portal, by means of straight branches, which run upwards in the columns of Morgagni.

There are three degrees of haemorrhoids. First degree, the haemorrhoids are small. Bleeding at stool is the only complaint. They cannot be palpated by a finger in the rectum. Second degree, the haemorrhoids prolapse through the ano-rectal ring, on straining at stool. They reduce themselves spontaneously. The mucosa becomes slightly thickened by irritation and bleeding is not so marked as in the first degree. In the third stage, the protrusion is still more noticeable and does not reduce itself spontaneously. Thrombosis, ulceration and infection are very liable to occur. Bleeding is usually slight.

The causation of haemorrhoids is a combination of several factors. The erect posture of the human race is a predisposing cause. Constipation and straining at stool, cause a congestion of the veins and are the commonest etiological factors. Any of the many causes of portal obstruction such as cirrhosis and neoplasms will cause a varicose condition of the valveless haemorrhoidal veins. The habitual use of drastic purgatives, particularly salts, predisposes to haemorrhoids.

*Symptoms*—bleeding at stool is the commonest complaint. A severe degree of secondary anaemia may result from a constant loss of what may appear to be a trivial quantity of blood. Pain is uncommon unless the haemorrhoids become prolapsed and thrombosed. Ulceration and infection may occur. In rare instances infection has spread upwards and a portal pyaemia has developed.

External haemorrhoids do not usually cause symptoms, unless thrombosis should occur, following straining at stool. This is made evident by a small tender swelling beneath the anal skin.

*Treatment*—there are three methods of treatment.

(1) *Palliative*—by prescribing mild laxatives, containing liquid paraffin, small haemorrhoids of the first degree, may stop bleeding. When internal haemorrhoids are prolapsed, thrombosed and infected, operation should not be performed. They should be treated by rest in bed and hot antiseptic fomentations.

(2) *Injection treatment*—is most suitable for internal haemorrhoids of the first and sometimes the second degree. Those of the third degree which remain permanently prolapsed, should on no account be injected, because thrombosis and ulceration will result. Under no circumstances should external haemorrhoids be injected, as the same complications will occur. The solution which gives the best results is five per cent carbolic acid in olive oil. A stronger solution, of twenty per cent carbolic acid in oil, is used in very small doses for resistant cases. The technique is simple. The knee chest position is the best, because on introducing a short speculum, air distends the rectum. The speculum is withdrawn until the ano-rectal ring is reached, when the piles prolapse into the lumen. The correct site for the injection is in the submucous coat, at the pedicle of the haemorrhoid. The solution should be injected until



a swelling occurs, on which small capillaries can be seen, against a pale background. If a dead white colour appears, it means that the injection is being given too close to the mucosa and ulceration is apt to result. Usually one to two c. c. of the five per cent solution of carbolic acid is injected into one or two haemorrhoids. The treatment is repeated at weekly intervals, until the haemorrhoids have been well shrunk by inflammatory changes, due to the irritating solution. Bleeding as a rule, ceases after the first treatment. It takes six to eight treatments to produce a cure. Relapses are common after three years.

(3) *Operative treatment*—the most permanent results as regards cure are obtained by operative treatment. The type of operation that is recommended is the removal of the haemorrhoids by dissection with scissors and ligation of the pedicle. If external haemorrhoids or hypertrophied tags of skin are present, they should be removed by cutting a triangular area of skin and then removing the external and internal haemorrhoids by stripping up the mucous membrane to the level of the ano-rectal ring. The operation can be very satisfactorily carried out under caudal anaesthesia. In some cases it will be necessary to supplement it by means of half per cent novocaine solution injected into the subcutaneous tissues and the muscles forming the ano-rectal ring.

The bowels are opened on the third day by means of castor oil by mouth and an olive oil retention enema.

Thrombosed external haemorrhoids are best treated by turning out the blood clot under local anaesthesia. The skin edges are cut away, so as to leave a flat wound.

### Ischio-Rectal Abscess

Ninety per cent are due to infection with pyogenic organisms. Less than ten per cent are tuberculous and usually associated with advanced pulmonary tuberculosis.

The origin of ischio-rectal abscess is almost invariably from the region of the anal crypts at the muco-cutaneous junction. This is the area of greatest narrowing due to the ano-muscular ring. Injury is most liable to occur due to the passage of a hardened stool. The most frequent valve to be injured is one situated posteriorly. Infection occurs in the traumatized valve. Lymphatics carry the infection outwards, between the muscle to the ischio-rectal fossa. Lockhart Mummery has pointed out the importance of the ano-rectal glands, as a cause of ischio-rectal abscess and fistula in ano. These glands lie in the deep external sphincter and their ducts open into the crypts of the anal valves. Suppuration in these glands is prone to travel into the ischio-rectal fossa. The fossa is filled with loose fat. Upward extension is limited by the approximation of the fasciae covering the levator ani and obturator internus muscle. If the abscess is allowed to discharge itself, eventually it breaks through the skin and leaves a discharging sinus. Fistula in ano is almost certain to be a final result.

The treatment of ischio-rectal abscess is by early crucial incision, extending from one indurated margin to the other. The skin edges should be elevated and cut away. This allows the freest possible drainage. If a fistula in ano is recognized at the time, it should not be treated until the abscess is healed, and only a small external opening remaining.



### Fistula in Ano

In practically every case the initial lesion has been an abscess, which may have occurred years ago. The causation has been discussed under ischio-rectal abscess. About ten per cent are tuberculous.

The symptoms complained of are a slight discharge of pus, and at times the external opening may heal. Pain, swelling and redness will result and an abscess form again. Relief will be obtained when the pus breaks through the opening in the skin.

*Diagnosis*—on carefully examining the skin overlying the ischio-rectal fossa, single or multiple openings will be noticed. The track can be traced to the anal canal, by a palpable induration. A tuberculous fistula presents an external opening with a bluish discoloration of the skin. A thin watery discharge may be expressed from it, as compared to a purulent discharge from a pyogenic fistula. The track of the tuberculous fistula is difficult to palpate, because the granulation tissue forming it is soft. The internal opening is often best detected by palpation with a finger in the anal canal. The opening is felt as a small area of induration, often in the mid line posteriorly. In seventy per cent of cases it is below the ano-muscular ring. A small probe is now inserted into the external opening. It should be gently introduced along the track until it appears through the internal opening, into the anal canal. A rectal speculum should be used in helping to discover the internal opening. When there are multiple external openings, it is important to remember that there is only one internally. The vital point to determine is the relationship of the internal opening to the ano muscular ring of muscles. Under no circumstances must they be completely divided either in one or two stages, because incontinence will result. As mentioned before the external subcutaneous sphincter may be divided in any direction without endangering continence.

The classification of fistulae is unnecessarily complicated. There is probably no such thing as a blind external fistula. It means that the examiner has failed to discover the internal opening. The important point to determine is the relationship of the internal opening to the ano muscular ring. The great majority are below it.

*Treatment*—healing can only be obtained by surgery. Injection of irritating chemicals into the track is doomed to failure. A cure can be obtained in a very large percentage of cases by a carefully planned operation. It is more difficult to carry out than many so called major operations. The essential point is to incise the track from the external to internal openings. Great care must be taken to determine the relationship of the internal opening to the ano-rectal ring. The skin edges are freely cut away. An onlooker is often surprised at the very extensive raw surface which is left, especially if there are multiple openings with ramifying tracks. The tracks are discovered by searching with a probe and palpating the indurated granulation tissue. The large flat wound affords perfect drainage. There should be an absence of a purulent discharge after a week. The wound should be frequently inspected and probed to make sure that an undrained track has not been overlooked. Fistulae with a high internal opening above the ano-rectal ring are uncommon. In these cases it is only possible to afford the freest external drainage and in the majority of cases the internal opening will heal over. The patient would much prefer the inconvenience of a slight discharge to having his life made



unbearable, by division of the ano muscular ring, and subsequently incontinence of blatus and faeces.

*Fissure in Ano* is really a traumatic ulcer in the anal canal. It is caused by a constipated stool over distending the anal canal. The tear occurs most commonly in the mid line posteriorly, due to the lack of support of the sphincter muscles. In some cases it arises from a torn anal valve, which is stripped downwards. The excess of mucous membrane forms the so called sentinel pile.

Symptoms are out of all proportion to the size of the lesion. The patient complains of agonizing pain when passing a stool. The pain often lasts for several hours. Constipation is aggravated by the dread of having a recurrence of the pain. A few drops of blood are often noticed on the toilet paper.

Examination must be gently carried out. On separating the anal margin, a small ulcer will be seen. The external subcutaneous sphincter muscle is in such a spasm that it is often impossible to insert a finger in the anal canal.

*Treatment*—recent fissures without any induration of their base may be cured by injecting one of the local anaesthetics soluble in oil, into the subcutaneous tissues and external sphincter muscle. Pain and muscular spasm will be relieved for two to three weeks, owing to the slow acting local anaesthetic. Liquid paraffine is given to render the stools soft. The ulcer is dressed daily with ichthyol.

A chronic fissure which has indurated edges and base, can only be cured by operation. The essential points are to dilate the subcutaneous sphincter and then excise the fissure, together with a triangular area of skin. The subcutaneous external sphincter may often be beneficially divided, especially if it feels indurated. The excision of the triangular area of skin provides free drainage and allows the anal wound to heal soundly within out.



# Nervous Indigestion

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THE subject matter of this discussion may be called by several names: Nervous Indigestion, Nervous Dyspepsia and Functional Indigestion or Dyspepsia. But by whatever name it is called, we find that it is a convenient term to describe those abdominal and epigastric symptoms which are so commonly seen and for which no organic cause can be found in the gastro intestinal tract. That such a term is required to designate those abnormal sensations which arise in the stomach and related to the intake of food is just as apparent to the specialist as it is to the general practitioner, and perhaps more so to the latter. Because it is the latter who has first treated the case, and it is he who will direct the future treatment of the patient. Therefore we think that it will be profitable to refresh our minds on the various aspects of the complex question of Nervous Indigestion.

No matter, then, by what name we call this symptom known as 'nervous indigestion', we should not fail to recognize it as a symptom and not as a diagnosis. It is not enough to label a case as indigestion, before attempting to rule out organic disease in the stomach as well as organic disease in the other structures of the body which are related to the stomach. And herein lies the difficulty. Nor is it to be considered unreasonable since all the requirements of the body, with the exception of air and light, must pass through the stomach and be broken down before they can be used for bodily needs. Hence there must be an intimate association between the stomach and the other structures of the body. Many of the ancients believed that the spirit of the being resided in the stomach, so subject was this organ to the influences of the body, the air, surroundings and associations.

In considering the number of patients who consult the average doctor in general practice, it is astonishing to note the number whose presenting symptoms are referable to the gastro-intestinal tract. Taking these individuals of all groups, with the exception of babies, it is a noteworthy point that the great majority of these patients are not suffering from any demonstrable structural disease of the stomach or the intestines. They are nervous dyspeptics. A majority of such patients in Hospital or Clinic practice with the same complaints even after exhaustive investigation are also labelled Nervous Indigestion. In the former office group of dyspeptics, we usually dismiss them after a careful history, which is of extreme importance in these cases, and more will be said of the importance of history later on, and routine physical examination. These patients are given advice about regularity of meals, proper diet and cooking and perhaps a tonic, or one of the well known stomachics. They go away satisfied, pleased with the result of the examination and assured of the absence of any organic disease. Many of these patients recover, and do not consult their physician for this complaint again. Some of them return with the same complaint and are sent to the hospital for a more exhaustive study of their complaints and these belong to the hospital group of dyspeptics, and are still labelled nervous indigestion on their discharge.



There were 3,000 cases investigated at the Mayo Clinic with gastro-intestinal symptoms. In only 15% was disease found in the stomach or duodenum, the gall bladder was diseased in 20%, the colon and appendix in 15%, in 10% the disease was found outside the abdomen (heart and lungs), in 40% no organic disease was found at all. In 240 cases investigated by Doctor Thomas Hunt, Saint Mary's Hospital, London,—his figures were stomach and duodenum 35%, gall bladder 19%, colon and appendix 10%, outside the abdomen 3%, and no organic disease 33%. In other words one third of all patients suffering from chronic indigestion seem to justify the diagnosis of functional or nervous indigestion.

To run through our method of investigating a patient with chronic indigestion, the first most important point is the taking of a good, complete history. Some one once remarked that the trouble with most doctors is not that they do not know enough, but that they do not see and hear enough. Perhaps it is the age of speed in which we live that prevents us from quietly sitting down by the patient and eliciting a history which by itself will put us on the right track for a diagnosis. So many patients come with nervous complaints and in their anxiety to tell everything, they present a jumble of complaints which would tax the patience of Job to unravel. It is important to determine the principal complaint, whether it is pain in the epigastrium, loss of appetite, loss of weight, flatulence, heart burn or vomiting. The onset of the illness needs very frequently a cross examination of the patient and he must be helped out because the onset will frequently give a diagnostic clue. An indigestion which appeared out of a blue sky may be due to cancer, especially in adult life, or beginning early in life with sharp epigastric pain radiating down to the lower right abdominal quadrant may be appendicitis, or beginning in the second decade of life with sharp pains in the stomach, then disappearing for months and perhaps years only to return again is probably ulcer. Gall stones usually make their first appearance after a pregnancy. The neurotic patient is apt to complain that he never has had good digestion.

#### *Periodicity of Attacks.*

Should the trouble come in attacks we can be pretty sure we are dealing with organic disease. When the attack lasts for weeks with complete freedom in between from digestion, we can suspect an ulcer. Should the attack last for a day or so with freedom of months of perhaps years in between, gall stone disease should be suspected. The neurasthenic is never free from discomfort except perhaps when he is on vacation. The most important symptom which sends a patient to the doctor is pain, and it is a symptom which frequently helps us to decide between organic and functional disease. So often it is a symptom which is difficult to assess, because the factor of pain differs so much in various individuals. At one questioning, what was described as pain in the epigastrium may only be a feeling of distress, or burning or fullness in the stomach. Nor should we be satisfied that the pain was in the stomach. We should have the patient point to the exact site. Frequently the patient with an ulcer can point his finger tip to the exact site, whereas the nervous dyspeptic is apt to place and roll the palm of his hand over the entire abdomen. Has the pain been severe enough to require a dose of Morphine? The upper abdominal pain of gall stones nearly always requires morphine. The abdominal pain which takes a patient from a sound sleep and causes him to double up and roll around in his bed or stalk the floor is surely not that of nervous indigestion and frequently



demands surgical intervention to give relief. The abdominal pain which comes on with faithful timing after meals is due to duodenal ulcer. The man who is always taking alkalis and gulping down bicarbonate of soda to relieve abdominal pain is usually not a neurotic. When the abdominal pain is made worse by jolting, it is usually due to an inflammatory process. Should there be a residual soreness or tenderness in the epigastrium after the onset of pain, we can usually be sure we are dealing with an inflammatory disorder. Some patients will complain of vomiting when actually the symptom is regurgitation, the food comes up shortly after it is eaten, without effort and unaccompanied by nausea, and is seen in nervous people. Belching is a difficult symptom to analyze, it may be spontaneous, occasional or long continued as from air swallowing which when once acquired, like scratching, is difficult to overcome. Mention will just be made of symptoms, like heart burn, nausea, loss of weight, sleep, constipation, headache, jaundice and dietetic habits—all of which are important and should be carefully enquired into in the bringing out of a good history from the patient.

The next step in the investigation consists in a complete physical examination of the patient. Frequently the examination of the stomach does not give much information and an investigation of the hernial orifices and rectal examination should not be neglected. The feeling of a tumor mass in the abdomen, or an area of rigidity or tenderness will immediately place the disease in an organic group. So frequently we find the examination of the abdomen in a patient with nervous dyspepsia a difficult task, because their abdominal muscles are very apt to be on guard, perhaps for reasons which have caused them to bury unpleasant episodes and to find an outlet in gastro-intestinal symptoms. But by taking their minds away from what is being done, it is possible to get the abdominal muscles relaxed and so complete a satisfactory examination. With just as much meticulous care should we examine the other systems, especially the respiratory and cardiac systems. The frequency with which active Pulmonary Tuberculosis may go on for a long time with symptoms such as loss of appetite, gas, distension and fullness of the epigastrium after eating and even with pains in the abdomen is within the experience of nearly everyone of us. In such cases there may not be any cough or expectoration which symptoms would direct one to the lungs. The only explanation to account for these abdominal symptoms in Pulmonary Tuberculosis is the toxæmia which is present. We have made it a rule that in all young people complaining of chronic indigestion to give particular attention to the examination of the lungs and to advise an X-ray of the Chest and to have their temperature taken every four hours. There are a number of patients in the fifth and the sixth decades of life who think they have indigestion because they want to belch and they feel as if gas were pressing up around the heart. In reality these symptoms are due not to chronic indigestion but to high blood pressure and to the distress of a failing heart. The possibility of Hyperthyroidism as being a cause of the chronic indigestion should not be overlooked. The nervous, irritable patient with palpitation, loss of appetite and weight, flatulence and diarrhoea, moist, clammy hands, and salmon pink skin requires a metabolic test rather than a gastro-intestinal series to explain the symptoms. The opposite picture, that of hypothyroidism, with the slow, retarded mentality, coarse features, inability to keep warm, falling hair and desire for sleep at all times, very frequently is labelled a neurotic until a metabolic test reveals the true nature of the condition. Nor should the nervous system be neglected



in the careful examination. Not infrequently the tabetic patient, with his lightning like girdle pains may be labelled abdominal or gall stone colic, or more serious perforation of a hollow viscus, until one elicits the absent knee jerks, the unequal pupils and failure to respond to light. The patient with a smooth tongue, sore mouth, anaemia, indigestion and diarrhoea may be labelled chronic indigestion unless the lemon tint of the skin, the possible cord changes, and the fairly good nourishment and blood pictures reveal the case as Pernicious Anaemia. So the examination includes the investigation of the entire body—the Genito-urinary tract and the spine for evidence of Arthritis.

Valuable as are the history and the physical examination in the establishment of a diagnosis, we should have recourse to other diagnostic aids. Gastric analysis is another aid but perhaps now its importance has been somewhat lessening after the experience of years. In normal individuals, the gastric secretions change so frequently that even in the hands of experts the results may be difficult to interpret. The complete absence of hydrochloric acid from the stomach contents was formerly thought to be diagnostic of Carcinoma of the stomach or pernicious anaemia, but now we know that a normal individual may have Achylia Gastrica and have no symptoms. On the other hand, examination of the residue in a fasting stomach may give valuable information. An excess of mucous may unmask an unrecognised chronic gastritis,—foul smelling blood tinged residue points to Carcinoma, and a large volume of residue in the stomach would indicate a stenosis due to ulcer of the duodenum. Although gastric analysis may be helpful, yet some would question its use as a routine procedure in a schedule of diagnosis. The examination of the stool for occult blood is most valuable. Especially the practice of placing the patient for three days on a meat free diet and having three consecutive specimens examined. We have been using the Gregorson-Benzidine test and have found it very accurate. Certainly from this procedure, should we find the specimen to be positive, we would not hesitate to diagnose organic disease of the gastro-intestinal tract. Finally, we come to the x-ray of the gastro-intestinal tract, the importance of which in the diagnostic chain of evidence is not open to question, with the possible exception to the interpretation of appendicular shadows. To quote from Alvarez:—

Many is the man or woman who has consented to a needless operation because the attending physician or surgeon was able to point menacingly to the shadow of an appendix that was a little long or a little short, a little bent, or perhaps a little slow in emptying.

And he adds that he is convinced that appendicitis cannot be diagnosed in this way. It is open to serious question whether the diagnosis of chronic appendicitis is ever justified except from the history of one or more attacks of acute appendicitis with the resulting chronic and sporadic right sided abdominal pain accompanied by constipation, flatulence, loss of appetite and a sensation of filling up quickly after meals. We do not think it has been out of place to mention these few remarks about Chronic appendicitis—We could not resist the temptation—and, moreover, chronic appendicitis does represent a minority in the causation of Nervous Dyspepsia.

Now that the field has been cleared for an appreciation and recognition of nervous indigestion, perhaps a classification can be attempted, and Daniel T. Davies of the Royal Free Hospital, London, has submitted the following three classes which do seem to offer a satisfactory working basis for the clinician.



First there is the so-called *Habit Dyspepsia*. This group is easily disposed of. For in it, we recognize those cases who have brought on an attack of indigestion due to overeating, over drinking, the use of improper food, and food badly cooked, unwise dietary habits, such as bolting down meals, eating when fatigued and excited, and finally improper mastication of food. In this latter respect, we would like to add that not infrequently, we have to incur the wrath of the dental surgeon who has supplied our patient with a denture that is ill fitting and which prevents the proper grinding and chewing of food. This group of patients can be readily recognized, and with appropriate treatment, which just consists of sound advice is restored to health.

The *Second Group*, a more formidable one, is the *Reflex Dyspepsia* and includes those cases of chronic indigestion which are due to organic disease outside the stomach. Within this group, are included diseases of the Gall Bladder, colon and appendix, heart and lungs, the nervous system, and in fact any organ outside the stomach. Occasionally, the diagnosis is easy, but not infrequently we must make use of all the diagnostic aids at our disposal to arrive at the true condition of affairs. The results of treatment are satisfactory and whether medical or surgical measures are carried out, the restoration of normal health is attained. Unless, there is this exception, the patient has been carrying on for a long time with some unmasked underlying organic cause of his indigestion and having been discovered and appropriate treatment constituted, there is no improvement. It is too late to effect a cure, because the nervous system of the patient has received repeated trauma upon trauma from the long continued strain of organic disease and worry and is now unable to adjust itself to the changed status and then he becomes a true nervous dyspeptic and belongs to this final group which we are now to discuss.

The *Third and Final Group*, and a most formidable one, is *Nervous Dyspepsia*. It includes those cases of Chronic Indigestion, suffering from all the symptoms, which organic disease can produce, and in whom there is no demonstrable signs of organic disease even after the most exhaustive search and investigation have been carried out. It can only be diagnosed by the process of exclusion and not be regarded as a cloak covering some organic change. It may be that as time goes on, some organic change may be demonstrated but until such time as we can prove that change, we are justified in our diagnosis of nervous dyspepsia.

Under ordinary circumstances, the normal man returns from his work and looks forward with pleasure to his meals, and there is a sense of pleasure, relaxation and feeling of bon vive at the close of the meal. There is no discomfort and such abdominal blessing may be his for years. But comes the time when he loses his appetite and suffers from abdominal discomfort and he does not connect this with the speech he has to make that evening, or an unpleasant experience at the office, or some domestic upset. We are all familiar with the healthy athlete who has diarrhoea around examination time, and even with those who have to retire and empty the stomach contents at the final orals. All of us must have had the experience of one who thinks himself to be blessed by perfect digestion, who under the strain of terror, calamity, or anxiety experiences the sensation of a grossly diseased digestive process.

For years, physiologists have demonstrated the effects of emotions on animals. It is well known how the dog will experience salivation when a tempting morsel is placed near him, and how peristalsis is slowed down and secretions become dry when he is frightened by a sudden noise. The classical



experience of Beaumont on Alexis Saint Martin proved that the emotions had much to do with gastric processes. When his patient was angered Beaumont noticed that the mucous of the stomach changed and the secretion became scanty or was suppressed entirely. There is the method of detecting a criminal in India where the suspects are lined up and given a mouthful of dry rice to swallow. The real culprit is the last to complete the act or is unable to do so because fear dries up his secretions. Hypnotism and even suggestion can produce diarrhoea, vomiting and abdominal distress. So we have sufficient experience in animals and human experience to indicate that there is an intimate and close association between the mind and the gastro-intestinal tract.

If then, the normal individual who is complacent, easy going and with good mental poise is at times the victim of an abdominal upset, what about his fellow being who is not so fortunate in his mental equipment? There are those fellow beings who are frail, sensitive and the wear and tear of life seem to fasten on them and never let go. Some of these unfortunates are truly nervous and unduly sensitive—they suffer from headaches, fatigue, poor mental concentration, and other nervous symptoms. Others of this class may not show such traits under ordinary circumstances, but when confronted with sudden strain, they are easy preys to nervous indigestion until the emergency passes off. There are those, too, who have buried in their unconscious mind some unpleasant experience of the past, some unfortunate position from which they were unable to escape, or some hidden sorrow or disappointment, and these, finding an outlet in gastro-intestinal symptoms, may compensate for their buried complexes.

Some writers like to classify nervous dyspepsia into two main groups—the Hypersthenic and Asthenic groups. Hutchinson says that nearly all dyspeptics tend to fall in either one of these groups. And he says that the nervous instability acting in the hypersthenic group is through the vagus and in the asthenic group is through the sympathetic. To consider these groups more in detail will, perhaps, give us a better understanding.

For the average hypersthenic dyspepsia, we would picture the successful business man, or the active and high pressure salesman, or the busy professional man with no outlet for relaxation. It is true that each one is successful, but the price of success has been a state of nervous instability. Everything is done in a hurry, meals are bolted down and are irregular and perhaps generous, as is witnessed by the florid complexion, the waist line and the apparent exuberance of health. But the stomach, just like everything else empties too quickly, and when it is full, he complains of acidity and when empty there is flatulence and discomfort. To assist these individuals, advice should be given regarding their mode of living. Some clinicians prefer to limit their carbohydrates and starches and to give protein freely so as to fix the free acids in the stomach, while others say that the protein increases the acids and they give carbohydrates in generous amounts. In any case, condiments, spiced foods and highly flavoured soups and gravies, smoking and alcohol should be eliminated to diminish acid secretions.

Tincture Belladonna—five to eight drops in a glass of water to be sipped before meals and during the meal will tend to diminish secretions. After the meals, an antacid powder with a sedative like bromide or phenobarbitol will help their feelings of discomfort.

In the asthenic group, our average patient is a thin, frail female who seems to have been buffeted by misfortune all her life. The stomach empties slowly,



secretions are diminished, and she complains of fullness and sinking sensations when the stomach is full—she is always tired and distressed. It is well to remember here that so frequently in these patients the X-ray show a low colon almost or in the pelvis. Alvarez says:—

I think I would as willingly ascribe symptoms to a large navel, or a hooked nose, to flaring eyes as to a mobile coecum, or to a redundant sigmoid flexure.

These patients require small, dry and frequent feedings, with fluids between meals—bulky foods are best avoided. It is common practice to prescribe hydrochloric or phosphoric acids to these patients to be sipped during their meals—and frequently the well recognized prescription of Soda bicarbonate, tincture nux, vomica and infusion gentian compound before meals to stimulate their gastric secretions. Advice and assurance, too, should be given this group, but the poor individual is so buffeted by time and circumstances that it is not likely to fall upon appreciative ears. They appreciate kindness and sympathy, but they are too tired and worn out to make the great effort of attempting a change in mental or physical outlook.

There is one other group that should be added to complete our picture of Nervous Dyspepsia—the so-called Psychogenic Dyspepsia. There are no clinical signs by any known means to demonstrate organic disease and yet indigestion is always and constantly the complaint. In fact, such patients have a fixed idea—a regular delusion that they have some organic disease of the stomach. This group of patients is almost unapproachable and will not accept the idea that their disorder is of nervous origin. They will even demand operation and will pass from surgeon to surgeon—it would seem that they are only content to suffer the pain of operation to have their trouble investigated.

Very briefly, we have mentioned the treatment of nervous dyspepsia, because we have been impressed by the small part which drugs, foods and diets play in the actual treatment of nervous dyspepsia and following this, is the attempt to stabilize and maintain a proper mental outlook on life and all its attending vagaries and fancies. In the treatment of nervous dyspepsia, those lines from MacBeth should be recalled:—

Canst thou not minister to a mind diseased;  
Pluck from the memory a rooted sorrow,  
Raze out the written troubles of the brain;  
And, with some sweet oblivious antidote,  
Cleansed the stuff'd bosom of that perilous stuff,  
Which weighs upon the heart?



# Recent Developments in Surgery of the Chest

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IT is the purpose of this\* lecture to draw your attention to some of the advances that have been made in the treatment of certain diseases of the chest during the last few years. The diseases to which I refer chiefly are, tuberculosis, bronchiectasis, benign tumors of the mediastinum and cancer of the lung. As two recent communications published in the NOVA SCOTIA MEDICAL BULLETIN during the year 1937 dealt with empyema and abscess of the lung, these two diseases will be omitted in this lecture.

The surgical treatment of pulmonary tuberculosis has developed from step to step over a long period of time. The history of this development has proven the efficacy of surgical collapse procedures and has led to their becoming well recognized. We have learned the value of collapsing the lung through the long observation of artificial pneumothorax. The chief indications for surgical pulmonary collapse may be said to be the same as for artificial pneumothorax in cases where artificial pneumothorax is impossible on account of adhesions. The surgical methods available are, (1) Phrenicectomy. (2) Intra-Pleural Pneumolysis. (3) Extra-Pleural Pneumothorax. (4) Thoracoplasty.

## Temporary Phrenic Paralysis

Little need be said at this time regarding phrenicectomy. The operation is well established as one of the methods of putting the diseased lung at rest and reducing the size of the hemi-thorax involved. The recent use of a temporary paralysis either by crushing or freezing the phrenic nerve is worthy of mention. The operation results in paralysis of the diaphragm for a period of three to six months, and the operation is useful where one desires to paralyze the diaphragm only temporarily, either because the disease is not far advanced, or there is evidence of a lesion in the opposite lung, which may have to be dealt with at a later date.

## Intra-Pleural Pneumolysis

Intra-pleural pneumolysis is performed in patients who have a partially successful pneumothorax, but in whom a satisfactory pneumothorax cannot be obtained on account of the presence of adhesions. The operation is carried out through the thoracoscope, and consists of cauterizing the adhesions near the chest wall.

## Extra-Pleural Pneumothorax

Extra-pleural pneumothorax as at present practised, is a new operation and is used to collapse a portion of the lung, usually the apex, when this cannot

\*Delivered at the Dalhousie Refresher Course, Aug. 1938 and illustrated by X-ray films and case reports.



be done by artificial pneumothorax. There are two types of this operation; first, where there is no pleural space, and second, where there is a partial pneumothorax and the lung is adherent in the upper portion of the chest. In the former the extra-pleural pneumothorax is maintained by refills of air as in an ordinary pneumothorax. In the latter two methods are available. Either the extra-pleural and the intra-pleural pneumothorax can be maintained as separate affairs, or the shelf of the pleura that separates them can be divided. This throws the two air spaces into one which has the double advantage of giving a better collapse and making only one space to be refilled by air.

Though of course an extremely delicate operation and one which requires great care and judgement, and though fraught obviously with many dangers if the greatest care be not taken, it appears to disturb the patient very little, and the condition shortly after the procedure is surprisingly good. There is no mutilation, and subsequent re-expansion of the lung can take place.

### **Partial Thoracoplasty**

Many modifications have taken place in recent years in the type of operation which is called thoracoplasty. The original thoracoplasty consisted of the partial resection of the eleven upper ribs and the principal involved was to allow the ribs to fall downwards, reducing the size of the thorax and permitting the lung to collapse. The newer types of thoracoplasty depend upon the principal of removing nearly all of the ribs over the lesion, permitting a wider range of selection in the portion of the lung to be collapsed, maintaining the existing healthy portion of the lung as functioning par enchyma. Thus, a partial thoracoplasty on one side may be combined with an artificial pneumothorax, an extra-pleural pneumothorax, or even a partial thoracoplasty on the other.

These newer types of operation have permitted the surgeon to approach with greater safety and assurance cases of bilateral tuberculosis where the more conservative methods have failed. This constitutes one of the greatest advances in the surgical treatment of pulmonary tuberculosis.

### **Bronchiectasis**

Bronchiectasis is a fairly common disease and cases probably exist in every practise. It is not generally known that the condition may be latent and symptomless, only becoming manifest after some infection, and enormous purulent expectoration may be produced. This may disappear and reappear again or the condition may become once more latent and quiescent.

Bronchiectasis may produce recurrent severe haemorrhages and nothing more. This is sometimes referred to as dry bronchiectasis. It may cause a loose cough with no expectoration or it may give rise to expectoration of purulent sputum. In the classical condition known to all of us there is expectoration of large quantities of offensive sputum, clubbing of the fingers and progressive deterioration of health.

### **Lobectomy**

Medical treatment may be sufficient to maintain general health. But if the disease is progressing other measures will have to be considered. The only radical treatment is lobectomy. If the disease is confined to one lobe or both lower lobes these may be removed by operation.



### Cancer of the Lung

During the past few years the technical achievement of removing a lobe of the lung or even the whole lung has resulted in increased interest in the early diagnosis of cancer of the lung. Any patient especially one beyond middle age in whom obscure pulmonary symptoms develop should have a systematic investigation. A chronic non-productive cough, haemoptysis, recurrent bouts of fever or chest pain are the most frequent symptoms. All cases of carcinoma of the lung can be roughly divided into two groups. First, carcinoma of the main bronchus or one of its first subdivisions, and second, carcinoma of the central portion or periphery of the lung. The symptoms of these two types differ.

*In carcinoma of the main bronchus or one of the first sub-divisions*, a persistent, non-productive cough is the most common symptom. The cough may become productive later on, and streaked with blood if the surface of the growth becomes eroded. Later symptoms are essentially those of bronchial obstruction. Wheezing or asthmatic-like spells may take place while the obstruction is incomplete. With a complete filling of one of the major bronchi there is often a retention of secretion, chest discomfort or pain.

With a clinical picture of this sort the following diagnostic procedures should be carried out. First, X-ray; second, bronchoscopy; third, lipiodol studies.

The chest X-ray as a rule shows atelectasis of the corresponding lobe or lung. It is important to remember that in the early case the X-ray usually fails to cast a shadow of the stem bronchus lesion.

By the bronchoscopic examination the lesion may frequently be visualized and a section may be removed for biopsy. An exact localization of the stem bronchus lesion is necessary in planning the extent of the operation. Widening of the carina and fixation of the mediastinum indicates presence of glandular involvement.

*A primary neoplasm arising in one of the smaller bronchi or bronchioles* must be located within the substance of the lung itself. An entirely different clinical picture will be produced. None of the factors resulting from bronchial occlusion will be present at an early stage. Cough and hemoptysis may be early symptoms but usually come later. Weakness, loss of weight and a low grade fever are frequent symptoms. The X-ray is entirely different from that seen in the bronchus-occluding type. The lesion itself casts a shadow, usually homogenous at first, later with necrosis of the center and superimposed infection; the shadow is variable. Great difficulty in differentiating tuberculosis or lung abscess may be encountered. The former can usually be ruled out by bacteriological studies. The history and character will aid in differentiating pulmonary supuration. Lateral, oblique and overexposed roentgenograms are often of value.

The peripheral lesion cannot be visualized bronchoscopically. Lipiodol studies are usually inconclusive although in some instances the lesion can be better localized in respect to lobes by its use.

The technique of lobectomy and total pneumonectomy has developed gradually as the physiology of the thorax has become better understood. Exploration of the thoracic cavity can now be undertaken without unreasonable risk.



Three factors have contributed to this achievement. The first is safe controlled anaesthesia. The second is better understanding of the physiology of the chest and the adoption of physiological principles during the operation. The third is concerned with wound closure, controlled pressure drainage and postoperative care.

### Benign Tumors

Benign intrathoracic tumors are relatively rare, but the new methods of thoracic exploration have permitted the surgeon to approach and remove lesions which were otherwise fatal. It is possible to have any type of tumor originate within the thorax because histologically each of the three primary germinal layers is represented in the embryological development of the chest and its contents. Histologically, benign space taking new growths represent approximately one third of the intrathoracic, extrapulmonary tumors.

Included in the benign growths are the following groups: (1) dermoid and teratoma, (2) fibroma, neurofibroma, perineural fibroblastoma and ganglioneuroma, (3) osteoma, chondroma and osteondroma, (4) myxoma, (5) lipoma, (6) cystic hygroma, hemangioma and lymphangioma. By far the most numerous and most important groups are the first two.

The term "perineural fibroblastoma" includes any tumor arising from tissues found surrounding nerve fibers and clinically can be enlarged to include the ganglioneuromas which behave in a very similar manner. These growths are usually found posteriorly in the thorax, typically along the gutter between the vertebrae and the ribs, adjacent to the sympathetic nerve chain. Occasionally they approach the intervertebral foramina and sometimes grow through this opening into the spinal canal when they assume a dumb-bell shape and are prone to cause neurological symptoms since that portion of the tumor then becomes a spinal cord tumor. They are usually pedunculated and tend to grow away from the midline.

These are among the most silent tumors in the thorax and some cause no symptoms whatever. Pain is the most common symptom and is due to pressure on nerves. The location of the pain, of course, depends on the location of the tumor. Long duration and periods of remission are common findings. Dyspnoea is a much less common symptom but is liable to occur if the tumor grows to be very large or if it is high in the chest where early pressure on lung or tracheobronchial tree can occur. Malignant degeneration takes place in some cases. When this happens pain is liable to become very severe and other symptoms related to invasion from primary growth or to distant metastases make their appearance.

X-ray shows a sharply defined tumor in the posterior mediastinum with a convex border laterally. Because of the occasional occurrence of a long pedicle, the mass may rarely lie anteriorly in the chest or at a distance from the spinal column. If there is interspinal extension, frequently erosion of the lamina and pedicle of the vertebra can be demonstrated. X-ray is of utmost importance in the diagnosis of this group. The X-ray appearance, with clearly defined margin, serves to distinguish the benign from the malignant or infiltrating type of tumor, although inflammatory reaction around one of these growths can closely imitate the picture of an invasive tumor. The position in the chest, which can be accurately determined by X-ray in the anteroposterior, lateral and oblique positions, is of importance in differentiating lymphomas



of all types which make up a large percentage of mediastinal tumors. The latter are usually centrally located and tend to follow the lymphatic distribution along the tracheobronchial tree while the perineural fibroblastomas lie posteriorly in the chest and are unilateral. A therapeutic dose of X-ray is of great value in cases of mediastinal tumor where the diagnosis is uncertain. In a few days the radiosensitive lymphatic growths will shrink in size while the benign tumors will show no change.

Benign tumors of the mediastinum are, a rather varied group, dermoids, congenital cysts, lipomas, neurofibromas, and teratomas, but all such tumors should be removed surgically, and good results should be obtained. The presence of such tumors should be ruled out in patients complaining of indefinite thoracic pain.



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## Anticipating Cancer

THE Canadian Society for the Control of Cancer has now been officially launched by His Excellency Lord Tweedsmuir. Provincial branches have been formed and organization of these are now, or soon will be, underway, and in such a way that every nook and cranny in this vast land will be represented in this network that will cover Canada.

As members of the Medical Society of Nova Scotia we have assumed obligations, and also as members of the Canadian Medical Association, whose offspring is this new Society. Just exactly what are these obligations to which we have put our hand and what is the relationship between the Canadian Medical Association, the Medical Society of Nova Scotia, and this new Society? In this issue, in response to our request, Dr. Gosse has very kindly undertaken to make clear to us step by step the story of the part played by the first two during the period of gestation and the moral influence which can be exerted over the offspring which now leads an independent existence.

As individuals we have the moral obligation inseparable from the practice of preventive medicine. After all is said and done no average general practice can yield during the course of a year more than a few cases of any one disorder, varied and numerous in the aggregate but limited in the particular. The specialist with a greater knowledge of a more limited field is apt to suffer from medical myopia, the chest specialist to see tuberculosis in every sneeze, the laryngologist a joint pain in every tonsil, the abdominal surgeon an appendix with every belly ache, the obstetrician suspicious everytime a woman is nauseated, and what shall we say of the urologist? The general practitioner with his broad and philosophical outlook will ever be the backbone of our profession.

Where cancer is concerned there is neither general practitioner nor specialist, but a combination is essential if any degree of success is to be attained. Physician, surgeon, pathologist and radiologist compose the Unit. But as is usual the weight must be borne by the backbone in the first instance. "Doctor", the very term used to address us, means "teacher." Teaching goes hand in hand with curing and alleviating, it is a moral obligation laid upon



our profession. Through the exercise of this function, it should be common knowledge to our patients that hoarseness is the earliest symptom of cancer limited to the vocal cord, and that such a type is the most amenable to treatment of all forms of internal cancer. That systematically repeated examinations may be necessary to establish a diagnosis and the operative treatment is relatively simple (laryngo-fissure), but if neglected and the disease spreads beyond, then the operation that must be undertaken (laryngectomy) is both formidable and mutilating, and the end result doubtful. They should be taught that cancer in a clean mouth is a curiosity and the combination of septic teeth and tobacco is the perfect setting for this dread disease. It should be A.B.C. to our women folk that vaginal bleeding appearing out of season may spell disaster if neglected and that here as elsewhere a single examination cannot be expected to settle the matter. What a reflection on our teaching that the average time between the first observation and the first examination is well over a year and a half, according to the records of Dr. Johnston. And to both men and women that a painless lump in the breast may mean cancer and should it prove to be so, that the younger the individual the more destructive. It sends shivers down my back to see a breast handled and massaged repeatedly because I can see with the mind's eye the cells being pushed and hurried on into the lymphatic vessels and the prospect of successful surgery becoming more remote with every squeeze. Our patients should know that rectal bleeding indicates the need for examination not an ointment for piles; that a sore tongue that continues to be sore; a cracked or sore lip that does not heal promptly; a wart or a mole that changes in character and begins to grow; and that a sudden impairment of vision does not always point to the need for glasses but each and everyone of these may be the early signs or symptoms of cancer at its curable stage. What is meant by the expression "curable stage" is that statistically speaking, what chance there is is better the earlier a patient receives the best we have to offer. Many practitioners have had the distressing experience of having had women who reported promptly post menopause vaginal bleeding only to find on examination a hopelessly advanced cancerous condition. Of all sad words of tongue or pen the saddest are "clinically early but pathologically late." The only way to avoid such a catastrophe is to have every woman who has passed the climateric to have her cervix examined at six monthly intervals.

True, internal cancer of this or that organ may reach an enormous size with metastases far and wide, before a single symptom is complained of, but even under such appalling circumstances surgery may bring some comfort.

As physicians we should ever keep in mind that the history, and it has been said that a good history contains the diagnosis, along with a careful clinical examination, takes precedence over a negative laboratory report. It should be emphasized that laboratory proceedings are aids to diagnosis and in no way relieves us of bedside thoroughness. The pathologist is a consultant and should be in possession of all the historical and clinical information that is available. And what doth the clinician require of the pathologist but to give a description of the microscopic appearance of the specimen submitted, to review the history and to then render his opinion. If that opinion supports the diagnosis of cancer, well and good, and nothing is added but confusion by a classification based on cell type, a refinement of very very questionable clinical value. The Unit is going to treat that case to the limit of treatment tolerance, be it by surgery alone, or radiation alone, or by a



judicious combination and is not going to modify its programme one iota because the report mentions Broder's number this or that.

Have we as physicians any obligation to those who are beyond all possibility of cure? Yes, very definitely so. No victim of this dread disease should be permitted to suffer needlessly. Today we have a variety of pain relieving and mind benumbing remedies and these should be administered with liberality, not by the clock but as required. True the patient will live longer than if worn out by pain but this should not deter us, as after all our task is not to shorten but to prolong life. Not to put forth every effort to make such patients comfortable is nothing short of brutal and almost borders on the criminal.

Unfortunately radium is becoming relatively cheap and as a result this powerful two-edged weapon will be available to the profession at large. God help the patients!! As enlightened leaders let us urge that its use be very strictly limited to those who are qualified by experience and training in the handling of such a high explosive.

Clarkson and Barker in a paper presented before the Fifth International Congress of Radiology and published in *Radiology*, December, 1938, say—"Radium is so frequently misused today that the number of cancer of the cervix patients who are rendered incurable thereby is far greater than the number being cured by radium therapy." Just think of it! The number rendered incurable is greater than the number cured, this is not because radium does not cure but because of ignorance of how to use it.

H. W. S.



## CASE REPORTS

### Migrating Ureteral Calculus in a Child

C. H. male. Aged 12 years. Admitted to the Victoria General Hospital Jan. 4th. 1939.

*Complaint.* Pain in left loin.

*Personal History.* The patient had measles, mumps, pneumonia and middle ear infection. About two years ago tonsillectomy was performed. The present illness began about one year ago and has continued intermittently as attacks of sharp pain in the left loin. The pain has not radiated and there have been no symptoms referable to the urinary tract. There has been no loss of weight. The last attack was three weeks before admission.

*Physical Examination.* Showed a healthy looking boy rather small for his age. The abdomen moved freely on respiration. There was no tenderness or rigidity and no masses were felt. The kidneys were not palpable and there was no tenderness in the loins or along the course of the ureters. The prepuce was phimotic and the meatus urethrae was small. The testes were normal. Examination otherwise showed nothing abnormal except that the urine was acid, sp.gr.1018, albumin 40 mg.per 100c.c. no sugar, 3-4 red corpuscle and a rare pus cell to the h.p. field.

Intravenous pyelograms made about two weeks before admission had shown an opacity apparently just below the ureteropelvic juncture. This was felt to be the shadow of a calculus.

He was kept under observation for several days. The temperature, pulse and respirations were normal. On Jan. 5th, 1939 another intravenous pyelogram showed normal pelves and calices. There was some tortuosity and dilatation of the left ureter. The opacity previously seen was in the region of the inferior major calyx of the left kidney.

Cystoscopic examination for the purpose of obtaining a retrograde pyelogram on the left side was done on Jan. 9th,'39, after preliminary meatotomy, using a no. 16Fr. cystoscope. A no. 5 catheter passed easily to the left pelvis and there was a free rhythmic flow of urine. The bladder was normal. A left retrograde pyelogram was made. No tubercle bacilli was found in the common or left kidney specimens. The left urine showed a few pus cells and many red corpuscles.

The retrograde pyelogram showed the opacity still in the inferior major calyx and the left ureter dilated. Jan. 10th, a plain film showed the opacity no longer in the kidney but at the lower end of the left ureter close to the bladder.

Feeling that this mobile calculus was too large to pass readily through the small ureteral meatus and that if it were allowed to remain there would be frequent recurrences of painful attacks and gradually increasing renal damage, operation was decided upon. As the calculus had migrated from the ureteropelvic juncture back to a calyx and then in twenty-four hours had descended to the lower end of the ureter another plain film was taken on the operating table just before operation to make sure of its position. This showed the calculus still in the lower third of the ureter.



The usual incision just above and parallel to Poupart's ligament was made and the peritoneum was pushed upwards. Fortunately the calculus was quickly felt and with an index finger making pressure on it to prevent its migration the *much dilated* ureter was exposed and opened over the calculus. The stone, which proved to be phosphatic, was about 1cm in length and about 0.5cm thick. The ureter was not sutured but the incision was closed with a cigarette drain leading down to the ureter. Circumcision was then done.

After the first twenty-four hours there was no drainage of urine. There was fever up to 101° for four days and the temperature then became normal. The wound healed well and on the ninth day he was discharged with directions for an acid ash, high vitamine diet as a prophylactic measure.

On another occasion a calculus located at the same point could not be found at operation. X-ray examination a day later showed that it was in the pelvis. This tendency to migration, especially in a dilated ureter, should always be borne in mind.

In my experience, renal calculi in children have been extremely rare.

### A Case of Perirenal Infection Simulating Neoplasm

S. H. Aged 39 years. Laborer. Admitted to the Victoria General Hospital Nov. 7th/38.

*Complaint.* Pain in the back and right loin.

*Personal History.* There has been no serious illness except that at the age of 5 years his left knee became painful and swollen and discharged pus at times until an arthrodesis was done six years ago, presumably for tuberculosis of the joint.

*Present Illness.* About three months ago he was working where he was exposed to a draft of cold air on his back. The next day there was some soreness in the right loin. This has never become very severe and has not radiated. He has not felt able to work since and the pain has persisted. About a month prior to admission he had some frequency with nocturia (1). About the same time he felt a lump or swelling in his right loin and saw blood in the urine.

*Physical Examination.* Showed the heart and lungs normal. The liver and spleen were not palpable. There was a large firm mass in the right loin evidently involving the kidney and transmitting an impulse from the posterior to the anterior hand on renal ballotement. There was slight tenderness on the right side of the abdomen. The left knee was ankylosed and there was some wasting of the muscles of the left thigh and leg. The external genitalia were normal. The prostate was firm, moveable and slightly enlarged. No pus was found in the prostatic fluid.

On Nov. 8th. cystoscopic examination showed a normal bladder. Both ureters were easily catheterized, although the right orifice was rather small and appeared immobile. There was a fair rhythmic flow of urine from each side. Indigo-carmin appeared in deep blue on the right in 6 minutes and on the left in 8 minutes. The common urine was acid with no albumin or sugar. There were few pus cells and a rare red corpuscle. The right and left specimens showed no pus. All three showed no tubercle bacilli.

The pyelogram showed "normal pelves and calices on the left. The right kidney showed marked elongation of the pelvis and calices. The whole appear-



ance is that of the seal body type of kidney suggesting hypernephroma." It was noted also that the shadow of the right kidney was very large and that the psoas muscle was visible on the left but not on the right. There was also some scoliosis with *convexity to the right* and some rotation of the spine. The lungs were clear with no evidence of metastases.

Because of the presence of a solid mass, apparently renal, the history of haematuria and the very characteristic pyelogram a diagnosis of renal neoplasm was made. In the hope of reducing the size of the mass and making nephrectomy easier a course of deep X-ray therapy was begun on Nov. 9th. and completed on Nov. 17th.

On Nov. 16th. the mass appeared smaller and the patient was comfortable. On Nov. 18th. there was rather severe pain in the right flank. From the third day after admission there was fever varying from  $100^{\circ}$  to  $102^{\circ}$ . This was thought to be possibly due to absorption from necrosis of the growth intensified by the irradiation. The leucocyte count was 12,000.

Fever and pain continued, the temperature being  $103^{\circ}$  on Nov. 24th. and  $100^{\circ}$  on November. 26. On the 27th. there was some cough and severe pain in the back rather above the kidney on the right, of pleuritic type. The chest was found clear except for some dulness at the right base. On Nov. 29th. there was much cough and thick purulent expectoration and he looked very ill. On Dec. 1st. the temperature was  $102^{\circ}$  and large amounts of greenish purulent sputum were being expectorated. There was limitation of movement of the right side of the chest with flatness over the lower third. The breath sounds were diminished over this area but there were no adventitious sounds. Aspiration was advised. Re-examination by X-ray showed "a diffuse opacity at the right base suggesting a pneumonic area." The sputum contained no elastic fibres. Direct smears showed many large clumps of staphylococci and numerous Gram positive and Gram negative bacilli. Cultures showed heavy growths of staphylococcus aureus with some diphtheroid bacilli. No tubercle bacilli were found.

On Dec. 5th re-examination of the lungs by X-ray showed "an interlobar effusion involving the anterior portion of the main fissure on the right side." On Dec. 13th 5cc. of fluid were aspirated from the chest. This contained a few pus cells. Cultures were sterile and tubercle bacilli were not found. Improvement was gradual with decreasing expectoration and more normal temperature. On Jan. 6th re-examination of the chest by X-ray showed "almost complete disappearance of the opacity previously observed at the right base. There is a diffuse infiltration present involving the right lower lobe." There was almost complete disappearance of physical signs previously found and the patient's condition had so improved that operation seemed safe. The renal mass had almost entirely disappeared. This was assumed to be due to radiotherapy.

At operation on Jan. 8th 1939, all the tissues were oedematous and matted together making the operation very difficult. On opening the renal fossa about four ounces of thin greenish odorless pus escaped. A sinus was found extending upwards towards the diaphragm and another extending down towards the right side of the pelvis. The kidney did not appear grossly abnormal, except that it was larger than usual, but a nephrectomy was done with great difficulty. A cigarette drain was left in place and the lumbar incision was closed in the usual manner.



The pathological report showed the kidney to be enlarged but showing only cloudy swelling. There was no suppurative pyelonephritis. There was no evidence of tuberculosis or malignancy. There was chronic pyelitis with much granulation tissue. Cultures of the pus showed the presence of *Staphylococcus pyogenes aureus*.

Recovery was uneventful except for slight infection of the incision.

It must be concluded that this was a case of perinephric abscess simulating a tumor and that the abscess discharged itself through the diaphragm and by a bronchial fistula. In perinephric abscess if there is a curvature of the spine it is away from the abscess, here it was towards it. It is unusual to get as definite a mass from an abscess, but it has been described. Marked deformity of the pyelogram due to the pressure of an abscess has been noted but rarely is such a characteristic X-ray picture of new growth produced as in this case.

FRANK G. MACK.

### Acute Perforated Appendicitis with Multiple Complications

Master J. L., age 15, was admitted to the Victoria General Hospital on December 29th, 1937.

- Complaints.*
1. Severe abdominal pain.
  2. Vomiting.
  3. Diarrhoea.

*Present Illness* began on December 24th, 1937 with right sided abdominal pain and a feeling of general malaise. The pain was not severe enough to double him up but he was uncomfortable on being moved. He slept well that night and on December 25th the pain was very much less severe and he was able to take part in the Christmas festivities and ate a hearty dinner. On the following day the right sided pain returned with increased severity and was accompanied by vomiting; this condition remained until December 29th when the pain became more severe and was generalized over the abdomen and accompanied by vomiting and now diarrhoea. Towards evening a doctor was consulted for the first time and advised removal to hospital. At the time of admission he experienced severe pain on moving and on deep inspiration. There were no urinary symptoms of any kind and no symptoms referable to the respiratory or other systems.

*Physical Examination*—The young boy looked very ill—being pale with a pinched, anxious expression, lying on his back with his knees flexed and complaining on being moved. Temperature 100.6F, Pulse 120, Respiration 25.

*General Examination*—showed no abnormality apart from that found within the abdomen.

*Abdomen*—very limited movement on respiration and no distention. There was marked tenderness over the whole abdomen being maximum at McBurney's point with diffuse rigidity and rebound pain. There were no masses palpable; the liver and spleen were not palpable nor was the liver dullness obliterated. There was dullness in the right flank but the left one was tympanitic.

*Rectal Examination* showed diffuse tenderness of the recto-vesical pouch but no masses were palpable.



*Laboratory Findings*—Urinalysis—negative. White cell count—29,850. Pre-operative diagnosis of a spreading peritonitis caused by a perforated appendix determined immediate operation.

*Operative Procedure*—was carried out through a right transverse abdominal incision midway between the anterior spine and the umbilicus. Free pus welled through the peritoneal incision, the presenting caecum and small bowel were reddened and there was no evidence of any localization of the infection. The appendix was gangrenous in its distal half, perforated and lying free, pointing towards the mid-line; it was removed without difficulty, as much free fluid removed by suction as possible and the abdomen closed after insertion of a sheath rubber and a soft rubber tube drain, B.I.P. paste was smeared through the wound and the skin was approximated with clips only.

Cultures taken at operation gave a growth of *B. coli communis*.

*Subsequent Course*—Immediately following operation a Hendin needle was inserted into the long saphenous vein just above the medial malleolus for a continuous intravenous drip, as well as an intranasal Levine tube for gastric suction and lavage. These were both left in position for a week at the end of which time his bowels were moving spontaneously and he was not vomiting.

His temperature which remained low for about five days began slowly to rise and eventually a pelvic abscess localized which on January 14th was opened through the anterior rectal wall and about a pint or more of *B. coli pus* was evacuated.

The boy remained well until January 19th when he developed intestinal obstruction suggestive of small bowel type. A Wangansteen suction gave marked relief on this instance but when it again returned on January 22 the tube produced no improvement and operation was performed. The abdomen was opened by a right paramedian incision and two omental bands were divided to relieve the obstruction. An enterostomy of the Witzell type was done proximal to the obstructed area. After a few days his bowels moved with enemata.

After this procedure a bilateral broncho-pneumonia developed and he was very ill for a week but gradually recovered.

The subsequent complications in sequence were:—

1. Abdominal abscess which pointed at, and was drained through the original transverse incision.
2. Abdominal abscess drained through lower end of the paramedian incision.
3. Right anterior sub-diaphragmatic abscess with associated right pleural effusion. The former was drained through a right subcostal incision, the latter took care of itself.

During this long post-operative course he received four citrated blood transfusions of 500cc'e each.

His period of re-habilitation was slow but fresh air, sunlight etc. effected marked improvement, and he was discharged May 18th, 1938.

On June 6th, 1938 he was again admitted with abdominal pain and vomiting. The picture was not that of intestinal obstruction nor did flat X-ray plate of the abdomen show any small bowel distention. There was no abdominal tenderness. Temperature 102F. Within the next few days he became definitely jaundiced and his abdominal pain subsided entirely. His tempera-



ture fell by lysis and he was discharged June 13th, 1938 with a diagnosis of catarrhal jaundice for want of a better diagnosis.

He has gradually improved in health and is now perfectly well.

- Summary.*
1. Acute perforated appendicitis with spreading peritonitis.
  2. Pelvic abscess.
  3. Intestinal obstruction.
  4. Bilateral broncho-pneumonia.
  5. Abdominal abscesses.
  6. Right sub-diaphragmatic abscess.
  7. Catarrhal jaundice?

E. F. Ross.

### A Case of Extrinsic Cancer of the Larynx

This is the case of a man aged 72 who complained of "cough, difficulty in swallowing and lumps in the neck". He was admitted to the ward on October 17th, 1938.

The patient was of a stocky build and apparently well nourished, whose family and personal history were negative.

The present illness dates back to July 1938 when he noticed lumps in his neck on the left side. These have increased slightly in size. In September 1938, the patient began coughing and this was aggravated by the taking of food. At this time he also noticed some difficulty in swallowing solid foods. Since then the cough has become worse and he has increasing difficulty in swallowing, so that he can take only liquids and semi-solids. There is a fair amount of expectoration, which, up to admission, had not shown any blood, but since then he has spit up some blood, but not a large amount.

The Kahn test was negative and X-ray examination of the lungs did not show any pathological changes. Examination of the throat revealed a fungating mass on the epiglottis extending to the lateral pharyngeal walls, particularly on the left side. The cervical glands were enlarged and hard on both sides, being more marked on the left. Dr. Smith's report on the biopsy was "a squamous epithelioma. Broder type 2".

Since we first saw him three months ago the growth has extended, involving the base of the tongue which is becoming fixed. There is a deposit on the lower pole of the left tonsil. The cervical adenopathy has increased, as well as the dysphagia, the latter so much so that a gastrostomy has been considered.

This is a case of extrinsic cancer of the larynx which is spreading very rapidly. The outlook is hopeless.

It should be noted that the glands were present for three months before he sought advice, and the lesion was far-advanced when first seen. The extent of the lesion and the involvement of the glands presented us with an inoperable case.

Dr. Johnston has given the patient fourteen deep X-ray therapy treatments to date. There was an improvement at first, but lately the symptoms have become aggravated.

Extrinsic cancer of the larynx is operable if seen early and localized to the upper edge of the epiglottis, or well defined on the ary-epiglottic fold or, when diagnosed in the early stage, in the post-cricoid region.



Extrinsic cancer of the larynx may begin on the epiglottis, the ary-epiglottic folds, or on the posterior surface of the cricoid. The intrinsic cancer involves the vocal cords or the sub-glottic region.

In conclusion, the symptoms of the extrinsic cancer are primarily referred to the pharynx and consist of difficulty in swallowing soon followed by pain. In the intrinsic form the first symptom is hoarseness, which is laryngeal in origin, the result of interference with the vibration of a vocal cord.

We should be on the lookout for malignancy in all patients of cancerous age who complain of throat symptoms, whether pharyngeal or laryngeal.

Operations on the intrinsic form, when localized to a vocal cord, give a high percentage of successes.

Only early diagnosis and early operative treatment in the extrinsic form can be successful. Otherwise palliative measures including an early gastrostomy, before nutrition becomes impaired, and X-ray therapy are all that can be done.

A. ERNEST DOULL.

### Cavernous Sinus Thrombosis of Otitic Origin

A school boy aged fifteen was admitted to the Victoria General Hospital on the afternoon of September 13th, 1938. He gave a history of having become aware of a dull ache in his left ear during the morning of the 9th, which was very soon followed by a discharge. He consulted a physician without delay who cleansed the ear and prescribed treatment to be carried out at home. The earache, however, became progressively worse and of sufficient severity to prevent sleep. Three days later, that is on the 12th, there developed discomfort behind the ear and a "pumping feeling" in the ear and actual pain on moving his jaw. During the day he was nauseated and finally vomited and this was followed by a chill and diarrhoea now added to his discomfort. Late that night he had a dizzy spell which lasted for an hour during which time he was unable to stand unsupported. This patient had been more or less subject to "colds in the head", and had had one for several weeks before the onset of his present trouble. The parents could not remember his having had any former trouble with his ears neither could the patient, apart from having had wax removed on one occasion and this was borne out by the fact that he had done a great deal of swimming during the summer without having had his attention directed to his ears on a single occasion.

The boy on admission appeared to be well nourished, somewhat undersized, rather pale and possibly mentally dull although his obviously impaired hearing may explain the latter. A coarse nystagmus on looking to the right or left but more marked on looking to the right was present. The pupils were of average size, regular in outline, and reacted promptly to light and accommodation. The fundi were normal. One had a vague impression that neck rigidity might be present. Reflexes appeared to be normal. No Babinski nor could clonus be elicited. The P. 98.6: P. 100: R. 20. There was well marked tenderness over the left mastoid area associated with a suggestion of oedema, some odourless, purulent discharge and the drum was bulging. A free paracentesis was promptly performed and pus under pressure released. Hot compresses were ordered, fluids to be forced and a two hourly temperature record to be kept. The following morning the temperature was 104.3 at 11 a.m., and the



general condition was not improved. That afternoon the simple mastoid operation was performed. A subperiosteal abscess was opened when the primary post aural incision was made. (Later a horizontal incision was made at a right angle to the primary and extended posteriorly and another separate and distinct pocket of pus was evacuated, presumably secondary to a septic thrombus in the emissary vein).

The lateral (transverse) sinus was thrombosed for a distance of approximately 4 cm. ( $1\frac{1}{2}$ "') Free bleeding could not be secured anteriorly but was posteriorly. Dr. Kinley very kindly ligated the internal jugular vein.

To our surprise the free surgical intervention made no difference in the progress of the disease. The maximum and minimum temperature of each successive day was on the whole higher than the preceding until he died on the morning of the 17th. The pulse rate steadily rose in much the same manner. He had no chills after admission to hospital, neither did the two hourly temperature record show any evidence of those sharp variations which we are in the habit of associating with a septic thrombosis, it was more or less a steady although somewhat irregular climb. The report rendered by Dr. Burns on the 16th was that "There is flaccidity of arms and legs on the left side, deep responses absent and the tongue deviates to the left. The Kernig was indefinite and there is stiffness of the neck. Lumbar puncture is suggested." The Schilling differential blood count showed a shift to the left as you would expect in so ill a patient. A smear showed a mixed infection of streptococci and diptheroids.

Permission for a partial post mortem was obtained and Dr. Smith reported "The lateral sinus contained soft septic thrombus spreading to communicate with the inferior petrosal sinus thence to the cavernous sinus all three containing similar septic clots. There was no evidence of meningitis or brain abscess."

*Comments.* The first observation is that "oedema of the lids and proptosis" the classical signs of acute cavernous sinus thrombosis were not observed. It is highly improbable that some one of the doctors and nurses (not to mention the parents) who were in attendance would fail to notice such a phenomenon.

The second that the whole course of events from the earliest aural discomfort until death was only eight days.

The third is that the maximum and minimum temperature record did not resemble the septic type usually depicted in cases of septic thrombosis in that it never fell even to normal but both minimum and maximum were on the whole higher with each succeeding day.

It may not be without interest to refer to the frequency and origin of cavernous sinus thrombosis.

Turner and Reynolds in their remarkable clinical and pathological study of fifty-five cases of intracranial pyogenic disease give the following table of origin for the twenty-two cases of septic thrombosis of the cavernous sinus.

1. Infection by Anterior Route (6 cases);

(a) From the Face—

Nasal Furuncle (2),

Septic Sore on Upper Lip (1),

Inflammation of Tear Sac (1).

(b) From the Paranasal Air-Cavities—

Frontal Air-Cavity (1),

Ethmoidal Air-Cavity (1).



2. Infection by Inferior and Medial Route (10 cases);
  - (a) From the Throat—  
Peritonsillar Abscess (1).
  - (b) From the Sphenoidal Air-Cavity (9).
3. Infection by Posterior Route (5 cases);
  - (a) From the Middle Ear Cleft (5).
4. Infection from an Undetermined Origin (case);
  - ? Frontal Air-Cavity (1).

They are of the opinion that such an infection presents two main types:

"1. The acute, (and here they adopted an arbitrary basis of seven days as defining the limit of the illness) which is sometimes fulminating in character in which clotting occurs rapidly, and the thrombus become infected almost as soon as it is formed. 2. The chronic or restrained type; in this type the infection may even be controlled so that cases of recovery occur."

Then one reads the informing and comforting words "In some cases disease of the cavernous sinus may remain undiagnosed during life owing to the absence to the of the clinical signs characteristic of the infection. This is a not infrequent occurrence when the infection enters the sinus posteriorly along the petrosal sinuses from a primary focus in the tympanic cavity or mastoid process."

Commenting on one of the cases which originated in the sphenoidal air-cavity in which oedema and proptosis were absent they go on to say: "The absence of the clinical signs of cavernous sinus thrombosis is explained by the microscopical examination of the sections, the clot being still confined to the blood spaces of the cavernous sinus."

H. W. SCHWARTZ.

Dr. T. W. MacLean of Lyman Street, Truro, left recently on the Ocean Limited for Rhode Island. Dr. MacLean plans to be away for about three months.

Dr. and Mrs. J. G. MacDougall of Halifax are spending the balance of the winter at St. Petersburg, Florida.

Dr. and Mrs. J. A. F. Young of Pietou plan to sail from Halifax the latter part of February for England where Dr. Young will take courses in surgery and medicine at the Hammersmith Hospital, London. Dr. Young expects to be away for one year.

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## CANCER SECTION

### Cancer Organization in Nova Scotia

The Editor,  
THE BULLETIN,  
Nova Scotia Medical Society.

Dear Mr. Editor:—

Replying to your request: It is not necessary that I should inform your readers as to any action that has already been taken by the Nova Scotia Medical Society in connection with the important matter of the Control of Cancer, yet, since it is easy for most of us to forget I would beg leave to refer them to reports of our Cancer Committee for 1936-1938, which reports were regularly adopted by the Nova Scotia Medical Society. However as they may not all have their files of your journal intact, it would, perhaps, be in order for me to submit, in the following, their salient facts:

- (1) That in 1936, the Nova Scotia Medical Society endorsed unequivocally the aims of the Cancer Committee of the Canadian Medical Association, under Dr. McEachern, and formerly made its objective our objective.
- (2) That it was made clear that the aim and later the obligation of that Canadian Medical Association Committee was to set up a Department of Cancer Control within the Canadian Medical Association, and also to set up a Lay-Medical organization—the Canadian Society for the Control of Cancer.
- (3) That in our last report we stated it to be our interpretation of (1) and (2) above that we would be carrying out the wishes of the Nova Scotia Medical Society were we to proceed to the establishing of the Nova Scotia Branch of the Canadian Society for the Control of Cancer, and we reported certain steps that we had already taken in that direction.
- (4) So that our members would be kept fully informed as to the structure of the new organization and of the federal-provincial relationship, we appended and read as part of the last report a circular letter received from Head Office and directed to the several Chairmen of the Provincial Societies' Cancer Committees in which their duties under the new legislation were clearly defined. I have no doubt but that all this is included in the minutes of the Society.

The answer to your question as to the relationship between the two societies—The Nova Scotia Medical Society and the Canadian Society for the Control of Cancer—would seem to be best given by dividing it into two parts. These may be called: (a) Moral and (b) Organic.

(a) **The moral relationship** is derived in three ways,—

- I. *From the obligation of the Canadian Medical Association, of which we are a part to set up within itself a Department of Cancer Control,*



and through that to bring into being the Canadian Society for the Control of Cancer. The Canadian Society is then the offspring of the Canadian Medical Association, and we have in consequence a parental obligation under our Canadian Medical Association heritage.

II. From the obligations deliberately assumed by our own Provincial Society under (1), (2) and (3) above. I need not point out to you the whole-hearted way in which organized Medicine in this province has always supported any effort to improve the cancer situation among our people. Its attitude in our annual meetings has been a great credit to our Society and has made possible those advances that have been made and those which will unquestionably be made in the immediate future.

III. The third arises out of the second and may be stated as the obligation which devolves upon every medical man to support all efforts in preventive medicine.

(b) **The Organic Connection:**

The Department of Cancer Control of the Canadian Medical Association has, as its Board of Directors, the Chairmen of the Provincial Cancer Committees, in addition to the regular officials with Dr. Routley as Chairman. In general the policy of the Department of Cancer Control of the Canadian Medical Association is the policy of a majority of the provinces, but in this particular case, the policy as may be imagined, is that of all Canada.

When the Canadian Society came to be extended to the Provinces, the first step was to make Provisional Assistant Secretaries of the Canadian Society of those men who were chairmen of the provincial Cancer Committees. They, as provisional Secretaries, were given very explicit instructions as to how they were to proceed to institute in their provinces, divisions of the Society.

It appeared desirable to the provisional officers of the Society in Toronto, to instruct those provisional Assistant Secretaries to see that they were themselves elected to the Grand Council of the Society as the medical councillors from their respective provinces. Reasons for such a step might be suggested as,—

- (1). One expense in having the Directors of the Department of Cancer Control, Canadian Medical Association, and the Medical members of the Grand Council of the Canadian Society come together for meetings of those bodies, as they did at Toronto in November.
- (2). It is probably the best way to maintain an organic connection between the Canadian Society and organized Medicine, where none is legally provided for and,
- (3). The certainty of securing men of experience and acknowledged interest for the Grand Council of the Canadian Society during its developmental period.

It is true however, that while the Grand Council of the Canadian Society must be composed of a medical man and a layman from each province, the medical man may be *any* medical member that the Society in any province might see fit to elect. *When, therefore, organized medicine creates the Canadian Society in any of the provinces it has no more legal control upon it than has a parent over a son who has reached his majority.* Medical



control will only be exercised through the medical members of the Society, and the degree of control will be proportionate to the number of doctors throughout the country who will become members and otherwise identify themselves with the work of the organization.

### **The Organization of the Society in this Province.**

The beginnings of this were made my responsibility under my appointment as provisional Assistant Secretary. Though thus made a matter of personal obligation by such appointment, any movement made by me was made as having obligation to the Nova Scotia Medical Society, as well. I therefore discussed with members of the Cancer Committee and as many other members of the Nova Scotia Medical Society as I could contact, the very important matter of selecting a man to head up the organization in this province. Various types and various individuals were discussed and no great unanimity of opinion could be found until two names were suggested to me by one of our provincial Medical Society members and I had again made the rounds and discussed the names with the members of our committee and such others as I could meet. One of the names was that of Mr. R. V. Harris, K.C.; and there was general agreement that if Mr. Harris could be induced to take it on he would be the best obtainable. After quite some consideration Mr. Harris accepted, and we proceeded to organize the Society.

Acting under instructions a call was issued for a small meeting. An equal number of doctors and of laymen were asked to attend and at the meeting at which 35% were doctors and 65% laymen and women, organization of the Society was begun. Mr. Harris and I were elected to represent this province at the meeting of Grand Council which was to be held in Toronto very soon thereafter. Mr. Harris was elected President of the Nova Scotia Branch of the Society, and Mr. G. E. Mahon was elected Treasurer. The election of a Secretary was deferred because of the importance of that office during the organization stage of the Society, until some one could be found who might give it the time that it will require. As provisional Assistant Secretary I was asked to carry on in the interim—that is, until next meeting of the Society.

The question of whether a layman or a medical man should head up the organization in this province might well be discussed. In this connection it is interesting to note that leading this Dominion in organization is British Columbia. There, Dr. McNair, a youngish aggressive man whom I met in Toronto in November, and who is Chairman of the Cancer Committee of his Provincial Medical Society is the President of the British Columbia Branch of the Canadian Society.

In Alberta, in Saskatchewan and in Manitoba, Dr. McGuffin, Dr. Colport and Dr. Fahrni, Chairmen of their respective provincial Cancer Committees have either assumed the presidency of the Provincial Branches of the Cancer Society or otherwise figure prominently in its activities. I don't know what the other provinces have done yet, but telling Dr. Cameron of Ontario what we had done in Nova Scotia, he told me that he thought he would do the same in Ontario, viz. have a layman made president of the Ontario Branch of the Cancer Society. At the same time he told me that it was his purpose to tour the province himself—more particularly to organize the hospitals in cancer work—as soon as he could get around to it.

In departing from the practice of the West in this particular we probably owe some explanation to the Nova Scotia Medical Society. In view of the



success that is attending cancer organization in the West there is much to be said in favor of their having a medical man as their president. Our course in this province however was taken deliberately, and although I must assume a great deal of personal responsibility under the instructions named, yet, this phase of the work was done by unanimous agreement of the Cancer Committee. It would not be wise to discuss at this juncture the factors which made that course desirable.

### Publicity:

The Board of Directors of the Department of Cancer Control of the Canadian Medical Association, which had its first meeting in Toronto in November the day before the meeting of the Grand Council of the Canadian Society, considered at length the importance of the kind of publicity the Society might engage in. It reserved to itself all medical educational effort and as a step toward the safeguarding of the nature or the quality of lay education, which was regarded as peculiarly the province of the new Cancer Society, decided to formally offer the Society to provide it with speakers who would be ready, on call, to address lay groups on some phase of the cancer question. (This offer was formally accepted by Grand Council the following day.) The possibilities for such a list in the different provinces was considered, and there was tacit agreement that the problem would be simplified in those provinces having medical schools.

In this province, it was expected that the Canadian Society would call upon us for speakers to help organize town or county units just as the headquarters office has been asked to supply speakers from Upper Canada to open various provincial campaigns. It seemed that there was not time to get a provincial list, and so that some list might be available I asked the Medical Faculty to supply such a list for the time being. I have since discussed the matter with a section of the executive of the Nova Scotia Medical Society and they have undertaken to circularize the profession.

In the meantime three calls have already come in—two that were personal requests to me to address groups and one that came through the president of the Nova Scotia Division of the Canadian Society. Perhaps these calls should have been attended to, but I took the position that all lay cancer activities in the province should now be carried on under the auspices and control of the Canadian Society for the Control of Cancer and that because there was no list of accredited men from the Medical Society or Faculty we were not in a position to move. It should not find it necessary to prepare its own. In regard to the provincial list, it should be stated that it was the wish of the Directors that doctors throughout the provinces who are qualified and willing, might well constitute such a list, and the question of the Authorship Committee's (Dept. of Cancer Control, C.M.A.) preparing skeleton addresses or other cancer information, which would be available to those who would appreciate such help, was considered.

Looking to the extension of organization of the Cancer Control Society throughout the province, it is my pleasure to report that doctors in practically every county in it have already indicated their interest, their willingness and at times their eagerness to assist in a very real way the work of the Society. This is, of course, what would be expected, and may be taken I think, as indicating that the Canadian Society for the Control of Cancer in Nova Scotia when



it spreads into their territory will not lack medical leadership and medical support.

Apropos of my request to Faculty, someone here expressed the fear that any attempt to send Halifax men to other parts of the province to address lay groups would meet hostility on the part of the local doctors. I know, Mr. Editor, that there are such things as susceptibilities in Medicine and I am also conscious of the fact that enthusiastic individuals may proceed a bit faster than is at times appreciated. Indications to hand however convince me that the Canadian Society will have even less of that to consider throughout the province than it will in Halifax. However, the whole keynote of organization as I see it is cooperation with the Medical profession. Medical men have been asked and will be asked to take the initiative in their towns and villages and when they begin to function it is my feeling that any of us working under the auspices of the Canadian Society will be happy to cooperate with them in any possible way.

In conclusion let me say that while the Canadian Society may be just now a "puling infant" requiring the usual amount of care and sustenance, I think the day may not be far distant when as a result of the growth which it will naturally be expected to manifest it will be contributing not only to the education of our people, which is it's immediate objective, but to the improvement of treatment facilities for cancer patients, to research, and perhaps not the least in it's humane beneficence, to the care of those subjects of incurable ulcerated growths who, still requiring care, can not be retained in an active general hospital.

It is the obligation of every medical man, in this, as in all the provinces, to give his support to this enterprise, and he is registered as one having interest in its success when, opportunity being provided, he takes membership in the Society at a cost of at least a dollar.

It is the hope of the Provincial Officers to see action in all parts of the province at an early date and I understand that plans leading to that are now being formulated.

I trust that this will prove sufficiently informative and I am,

Yours very sincerely,

NORMAN H. GOSSE, M.D.

Halifax, N. S.  
Feb. 1st, 1939.

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## Royal College of Physicians and Surgeons of Canada

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Halifax has been designated as one of the centres at which the complete Fellowship Examination, Primary and Final, will be held in October, 1939.

The subjects of the Primary Examination are—Anatomy, including Histology and Embryology; and Physiology, including Biochemistry.

The Primary Examination is partly written and partly oral, and must be passed as a whole.

The principal condition, ordinarily, of admission to the Final Examination, is that a candidate must have passed the Primary Examination of this College or that of the Royal College of Surgeons of England. There are in addition other conditions regarding licensure, etc.

In accordance with a By-law put into effect in 1935, however, provision is made for certain medical graduates to be admitted to the Final Examination without having taken the Primary in the regular way.

"Candidates who are graduates of 1930 or prior thereto of a Medical School or University approved by Council, shall not be required to take the Primary Examination, but shall in the Final Examination demonstrate a general practical knowledge of the clinical application of Anatomy and Physiology.

The examination for this *Special* class of candidates shall consist of:—

- (a) The Final Examination as presented to the Regular candidates;
- (b) A special examination in Anatomy and Physiology conducted by clinicians.

The privileges of this subsection shall become obsolete on December 1st, 1940."

The Final Examination is partly written, partly clinical, and partly oral, and must be passed as a whole.

It is felt that the provision for the Final Examination under the above quoted *Special* By-law, remitting the Primary Examination, will be of interest to an appreciable number of our members throughout the Province.

Further details regarding these Examinations, Standards of Qualification, Fees, etc., will be gladly furnished on request by the Honorary Secretary, Dr. Warren S. Lyman, F.R.C.P. (C), 292 Somerset Street W., Ottawa.

Drs. K. A. MacKenzie and J. G. MacDougall, Nova Scotian members of the Council of the College, are also available for consultation in the matter.

It is hoped that a number of our younger, though not exactly recent graduates (1930 or prior thereto), who may have been considering this special examination, will now think intensively about it, and have themselves in readiness to take advantage of this first occasion on which the complete examination will be held in Halifax.

We have a very small, but very worthy, list of Fellows by examination in this Province. There seems to be no reason why this list should not be materially lengthened.



## LIST OF NEW BOOKS IN THE MEDICAL LIBRARY

January 19, 1939

## ANATOMY AND HISTOLOGY:

- |                             |   |
|-----------------------------|---|
| Miller, W. S.               | The lung.                                   |
| Miller, R. H.               | Applied anatomy.                            |
| Abbott, Maude.              | Atlas of congenital cardiac disease.        |
| de Beer, G. R.              | Development of the vertebrate skull.        |
| Bresslau, Ernst.            | Mammary apparatus of the mammalia.          |
| Carleton, H. M.             | Histological technique.                     |
| Clark, Beattie and others   | The hypothalamus.                           |
| Claoue, C.                  | Oreille interne, 2d ed.                     |
| Coghill, G. E.              | Anatomy and the problem of behaviour.       |
| Hewer, Evelyn.              | Textbook of histology for medical students. |
| Neal, H. V. and Rand, H. W. | Comparative anatomy.                        |
| Keiller, Wm.                | Nerve tracts of the brain and cord.         |
| Watson, A. McL.             | Handbook of histology.                      |

## BIOCHEMISTRY:

- |                              |  |
|------------------------------|--|
| Coward, Katharine.           | Biological standardization of the vitamins.            |
| Fieser, L. F.                | Chemistry of natural products related to phenanthrene. |
| Gilman, Henry.               | Organic chemistry, 2 v.                                |
| Gortner, R. A.               | Outlines of biochemistry, 2d ed.                       |
| Harris, Leslie.              | Vitamins in theory and practice, 3d ed.                |
| Needham, J. and Green, D. E. | Perspectives in biochemistry. (31 essays).             |
|                              | Nutrition: the newer diagnostic.                       |
| Sobotka, Harry.              | Chemistry of the sterids.                              |

## PHYSIOLOGY:

- |                        |  |
|------------------------|--|
| Best and Taylor.       | The living body.                       |
| Best and Taylor.       | The human body and its functions.      |
| Henderson, Y.          | Adventures in respiration              |
| Holmes, Eric.          | Metabolism of living tissues.          |
| MaeLeod, J. J. R.      | Physiology in modern medicine, 8th ed. |
| Smith, Homer W.        | Physiology of the kidney.              |
| Sherrington, Sir Chas. | The brain and its mechanism.           |

## PHARMACOLOGY AND THERAPEUTICS:

- |                                    |  |
|------------------------------------|--|
|                                    | Canadian formulary.                              |
| Clark, A. J.                       | Applied pharmacology, 6th ed.                    |
| Foldes, Eugene.                    | New approach to dietetic therapy.                |
| Leschke, Erich.                    | Clinical toxicology.                             |
| Martindale, W. H.                  | Extra pharmacopoeia, 21st ed.                    |
| Mellon, R. R. and others.          | Sulfanilamide therapy of bacterial infections.   |
|                                    | New and non official remedies, 1938.             |
| Nicholls, L.                       | Tropical nutrition and dietetics.                |
| Ruddiman, E. A. and Nichols, A. B. | Incompatibilities in prescriptions 6th ed.       |
|                                    | Pharmacopoeia of U. S., 11th decennial revision. |



**PUBLIC HEALTH, HYGIENE, ETC.:**

- |                            |  |
|----------------------------|--|
| Bolduan, C. F. and N. W.   | Public health and hygiene, 2d ed.                  |
| Clay, Henry H.             | The sanitary inspector's handbook, 3d ed.          |
| Cruikshank, E. W. H.       | Food and physical fitness.                         |
| Currie, J. R.              | Manual of public health hygiene.                   |
| Glaister, John             | Medical jurisprudence and toxicology, 6th ed. '38. |
| Falk, I. S.                | Security against sickness.                         |
| Fisher, I. and Emerson, H. | How to live, 20th ed.                              |
| Kendall, Jas.              | Breathe freely; the truth about poison gas.        |
| Sisson, H. A.              | On guard against gas.                              |
| Robertson, Wm.             | Introduction to hygiene, 2d ed.                    |

**GENERAL MEDICINE:**

- |                                   |   |
|-----------------------------------|---|
| Gordon, R. G. and others.         | Survey of chronic rheumatic diseases.                   |
| Friedenwald, Morrison and others. | Clinics on secondary gastro-intestinal disorders.       |
| Savill, Agnes.                    | The hair and scalp.                                     |
| Thorndike, A.                     | Athletic injuries; prevention, diagnosis and treatment. |
| Winternitz, M. C. and others.     | Biology of arteriosclerosis.                            |
| Dick, G. F. and Dick, G. H.       | Scarlet fever.  |

**SURGERY:**

- |                       |                                    |
|-----------------------|------------------------------------|
| Bernard, Irene        | Anaesthesia abstracts.             |
| Homans, John.         | Plastique mammaire.                |
| Markowitz, J.         | Text book of surgery, 4th ed.      |
| Menegaux and Odiette. | Text book of experimental surgery. |
| Thorek, Max.          | Osteosynthesis.                    |
|                       | Surgical errors and safeguards.    |

**OBSTETRICS AND GYNECOLOGY:**

- |                   |  |
|-------------------|--|
| Ballantyne, J. W. | Manual of ante-natal pathology and hygiene, 2 vol. 1. The foetus. 2. The embryo. |
| DeLee, Joseph B.  | Principles and practice of obstetrics, 7th ed.                                   |
| Wilson, J. St.G.  | Pre-natal and post-natal management.   |

**PSYCHIATRY:**

- |                   |  |
|-------------------|--|
| Adler, Alexandra. | Guiding human misfits.   |
| Berman, Louis.    | New creations in human beings.   |
| Bluemel, C. S.    | The troubled mind.   |
| Harrington, M. A. | A biological approach to the problem of abnormal behavior.                         |
| Penrose, L. S.    | Clinical and genetic study of 1280 cases of mental defect (Med. Research Council). |

**BIOGRAPHY:**

- |                       |                               |
|-----------------------|-------------------------------|
| Hertzler, Arthur E.   | The horse and buggy doctor.   |
| Maughan, W. Somerset. | The summing up.               |
| Olmsted, J. M. D.     | Claude Bernard, physiologist. |

**MISCELLANEOUS:**

- |                            |   |
|----------------------------|---|
| Balme, H.                  | The relief of pain.                         |
| Boule, Marcellin.          | Fossil men.                                 |
| Crothers, B.               | A pediatrician in search of mental hygiene. |
| Fulop-Miller, Rene.        | Triumph over pain.                          |
| Langdon-Brown, Sir Walter. | Thus we are men.                            |
| Mainland, W. F.            | German for students of medicine and science |
| Wolf, G. D.                | The physician's business.                   |
| Purves-Stewart.            | Diagnosis of nervous diseases, 8th ed.      |



# Department of the Public Health

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 Mepy).

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 Smith, Harry, Caledonia, (Mepy).

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 rington Mepy).  
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 Churchill, L. P., Shelburne, (Mepy).

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 Lebbetter, T. A., Yarmouth, (Wedgeport).  
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 Mepy).

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 January 1st., 1939, to February 1st., 1939.**

During the month, 278 tissues were sectioned and examined, which with 23 tissues from 7 autopsies, makes a total of 301 tissues for the month.

Tumours, simple.....	30
Tumours, malignant.....	41
Tumours, suspicious of malignancy.....	2
Other conditions.....	205
Tissues from 7 autopsies.....	23
	—301



**Communicable Diseases Reported by the Medical Health Officers  
for the month of January, 1939.**

County	Cerebro Spinal	Chickenpox	Diphtheria	Influenza	Measles	Mumps	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	V. D. G.	V. D. S.	Whooping Cough	Infantile Paralysis	Paratyphoid	Impetigo	German Measles	TOTAL
	Meningitis																	
Annapolis.....											2		1					3
Antigonish.....		1																1
Cape Breton.....			5		5			11				2	2				1	26
Colchester.....					1													1
Cumberland.....																		
Digby.....							2	2										4
Guysboro.....																		
Halifax City.....		5	14		7			12						1				39
Halifax.....																		
Hants.....																		
Inverness.....							2											2
Kings.....		1		21			3			1						2		31
Lunenburg.....								1										1
Pictou.....																		
Queens.....								2				1						3
Richmond.....					3													3
Shelburne.....																		
Victoria.....		3				40		2										55
Yarmouth.....			3															3
TOTAL.....	10	22	24	16	40	7	40		1	2	3	3	3	1		2	1	172

Positive cases Tbc. reported by D.M.H.O.'s. 46.

**RETURNS VITAL STATISTICS FOR DECEMBER, 1938**

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis.....	12	15	12	11	10	0
Antigonish.....	9	8	0	10	5	1
Cape Breton.....	94	77	82	82	41	6
Colchester.....	21	28	19	9	7	4
Cumberland.....	46	37	20	8	12	0
Digby.....	20	17	18	13	13	2
Guysboro.....	12	20	20	6	3	4
Halifax.....	84	63	57	69	63	12
Hants.....	17	23	11	14	9	0
Inverness.....	15	13	5	9	5	0
Kings.....	41	20	21	16	13	1
Lunenburg.....	25	25	23	24	21	4
Pictou.....	27	27	8	25	23	1
Queens.....	10	15	12	3	4	2
Richmond.....	13	11	1	4	5	0
Shelburne.....	11	9	9	7	8	0
Victoria.....	5	4	7	3	1	0
Yarmouth.....	23	22	17	19	7	2
	485	434	352	342	250	39



One of a series of advertisements published by Parke, Davis & Co. in behalf of the medical profession. This "See Your Doctor" campaign is running in *Maclean's* and other leading magazines.



## HOPE FOR WOMEN AFRAID

**MOST WOMEN** drift toward change of life with fear and dread in their hearts.

Change of life is a difficult period for any woman. The changes taking place within her are often bewildering and alarming. She is likely to feel that her charm is gone and that the golden days of her womanhood are irrevocably past.

Yet the truth is that such fears and broodings are, to a large extent, without foundation. They are a hold-over from former days, when change of life was a merciless tyrant to so many women.

But today the tyrant's grip is

broken. Medical Science knows a great deal more about menopause (change of life) than in the days of our mothers. What is more important, medical science today can *do* a great deal more about it. That's why the doctor now can offer every woman both hope and help at this crucial time.

If you are approaching the age of the menopause (it commonly begins between the ages of 45 and 50) consult your doctor. If you have already noted anything which might mean such a change is in progress by all means see him without delay.

Your doctor can materially al-

leviate physical distress; can give comfort to the body and peace to the mind through the entire period of transition and adjustment. He can show you how the years that follow the menopause frequently can be the happiest, most useful, and most rewarding years of a woman's life.

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The World's Largest Makers of  
Pharmaceutical and Biological Products

**SEE YOUR DOCTOR**



## Personal Interest Notes

Dr. L. F. Doiron of Little Brook, Digby County, sailed recently on the "Duchess of Bedford" for a year's post-graduate study in the Old Country.

Congratulations to Dr. and Mrs. J. C. Acker of Halifax on the birth of a son on January 29th, and to Dr. and Mrs. C. R. Trask of Sheet Harbour on the birth of a son on January 21st.

Dr. F. L. Moore, who has been the health director of Sullivan County, Tennessee, for the past ten years, has received the appointment of Professor of Preventive Medicine at the Long Island College of Medicine, New York. Dr. Moore is a native of Colchester County and graduated from the Dalhousie Medical School in 1924. He took post-graduate instruction in preventive medicine at the Vanderbilt University, Nashville, and Johns Hopkins University School of Hygiene at Baltimore.

Dr. A. B. Campbell of Bear River addressed the Victorian Order of Nurses at their annual meeting held at Digby on January 13th. Dr. Campbell's address was on the subject of preventive medicine.

Dr. C. K. Fuller of Yarmouth spent a few days in Boston in January.

Dr. and Mrs. W. Ross Wright of Yarmouth have left to take up residence in Fredericton, N. B.

Dr. R. J. MacDonald, who has been practising in Newfoundland for the past thirty years, has returned to Antigonish where he intends to take up practice.

The BULLETIN is glad to hear that Dr. G. W. T. Farish of Yarmouth who has recently undergone an operation at Montreal is doing well.

We regret to learn that Dr. R. M. Benvie of Stellarton has undergone an operation at the Victoria General Hospital, Halifax.

Dr. H. K. MacDonald of Halifax has recently returned from a visit to Toronto where he spent his time in the Department of Surgery of the Medical School of the University.

Dr. L. R. Ryan of Bass River has established himself in Northern Victoria. Dr. Ryan plans to make his headquarters at Dingwall.

Dr. O. R. Stone of Bridgetown recently addressed the Bridgetown Branch of the Canadian Legion on conditions in Europe.



We are now pleased to announce  
THE SUCCESSFUL USE OF

# DAGENAN

(2-Sulphanilyl-Aminopyridine)

## M & B 693

in the  
CHEMOTHERAPY  
of

# GONOCOCCAL INFECTIONS

Spectacular results obtained in the treatment of pneumonia with Dagenan suggested its trial in gonococcal infections.

Repeated clinical trials have now demonstrated that Dagenan, in the treatment of Gonococcal Infections, exerts a higher activity and a relatively lower toxicity than has previously been attained with other chemotherapeutic agents.

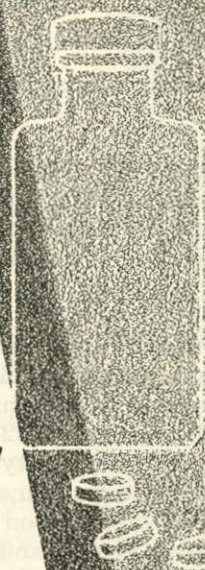
A booklet is now available with information about the methods of use and dosage of Dagenan in the Treatment of Gonococcal Infections.

Physicians who have not yet received this booklet are invited to send for a copy by using the attached coupon.



**HOW SUPPLIED:**

Tablets each containing 0.5 gramme of the active substance in bottles of 20, 100 and 1000 tablets.



## Laboratory Poulenc Frères

OF CANADA LIMITED - MONTREAL

POULENC FRÈRES, 204 Youville Square, Montreal.

Please send me at once information about DAGENAN (M. & B. 693) in the treatment of gonococcal infections.

.....  
(Signature of Doctor)  
.....  
.....



## OBITUARY

The BULLETIN regrets to learn of the death of Dr. Stephen Sinclair Slauenwhite which took place at the Freemasons' Home, Windsor, on January 12th. Dr. Slauenwhite was a graduate of Dalhousie Medical School in 1896, and formerly practised at Rose Bay, Lunenburg County. On account of ill health he has been residing for the past four years at the Freemasons' Home at Windsor. Dr. Slauenwhite was seventy-two years of age.

Dr. William Grant of Wolfville passed away at his home on February 5th after a protracted illness. Born at Big Bras d'Or in 1862 he taught school there as a young man. Graduating in medicine from Dalhousie University in the class of 1892, he moved to Port-aux-Basques where he practised his profession for thirty years. In 1921 he returned to his native province and established his home in Wolfville where he became one of the leading citizens and devoted a good deal of his time to public affairs. He was a member of the town council and school board and was closely associated with the development of Eastern Kings Memorial Hospital. He was an elder in St. Andrews United Church and at the time of his death was Honorary President of the local branch of the Victorian Order of Nurses. Surviving are his widow, Valetta Anne Hickman, his brother Daniel J. Grant of Big Bras d'Or; a daughter Mrs. F. H. Sexton of Halifax; two sons Dr. W. P. Grant of Sussex, N. B., and Nelson H. of Halifax. Rev. D. M. Grant of St. Matthew's Church, Halifax, is a nephew.

Dr. John Clyde MacDonald, of Edmonton, Alberta, died on December 28th, 1938, in his seventieth year. He was born at Gore, Hants County, and a graduate of Dalhousie University, 1895. Before going west Dr. MacDonald practised in Westville, N. S. He went to Edmonton in 1912.

Dr. John Bion Bogart, former president of the Brooklyn Surgical Society, and one of the founders of the American College of Surgeons, died at Middleton, N. S. on January 17th. For twenty-five years Dr. Bogart was one of the leading consulting surgeons of Brooklyn. He was on the staff of the Methodist Episcopal Hospital, also the Kings County Hospital at Coney Island and the Brooklyn Home for Consumptives. Several years ago Dr. Bogart retired from practice and returned to his native province.

Dr. Bogart was born in Lower Granville, Annapolis County, in 1859. He received his early education at Acadia University and afterwards graduated from the Bellevue Hospital Medical College.

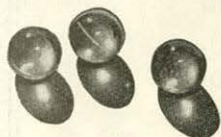


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10 and 50 cc. brown bottles in light-proof cartons. Not less than 60,000 vitamin A units, 8,500 vitamin D units (International) per gram. 100 times cod liver oil\* in vitamins A and D.

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Especially convenient when prescribing vitamins A and D for older children and adults. As pregnancy and lactation increase the need for vitamin D but may be accompanied by aversion to large amounts of fats, Mead's Capsules of Oleum Percomorphum offer maximum vitamin content without overtaxing the digestive system. 25 and 100 10-drop soluble gelatin capsules in cardboard box. Not less than 13,300 vitamin A units, 1,850 vitamin D units



(International) per capsule. Capsules have a vitamin content greater than minimum requirements for prophylactic use, in order to allow a margin of safety for exceptional cases.

**Uses:** For the prevention and treatment of rickets, tetany, and selected cases of osteomalacia; to prevent poor dentition due to vitamin D deficiency; for pregnant and lactating women; to aid in the control of calcium-phosphorus metabolism; to promote growth in infants and children; to aid in building general resistance lowered by vitamin A deficiency; for invalids, convalescents, and persons on restricted diets; for the prevention and treatment of vitamin A deficiency states including xerophthalmia; and wherever cod liver oil is indicated.

\*U.S.P. Minimum Standard

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Belleville, Ont.



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We purposefully selected for these products classic names which are unfamiliar to the laity, or at least not easy to popularize. No effort is made by us to "merchandise" them by means of public displays, or over the counter. They are advertised only to the medical profession and are supplied without dosage directions on labels or package inserts. Samples are furnished only upon request of physicians.

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**OLEUM PERCOMORPHUM**  
Ethically Marketed — Not Advertised to the Public



# The New Synthetic Antispasmodic

# TRASENTIN "CIBA"

(Diphenylacetyldiethylaminoethanolester-hydrochloride)

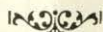
Trasentin exhibits an antispasmodic action similar to that of atropine, but without the unpleasant side-effects of the latter drug on the heart (acceleration of the pulse, palpitation, etc.), on the pupil (mydriasis), on the accommodation (visual disturbances) and on the salivary glands (dryness in the throat, thirst and even dysphagia). It is not a simple substitute for atropine, but possesses the advantage of acting in a marked degree also on smooth muscle tissue, like papaverine. Clinical investigations have shown that Trasentin is well tolerated.

**SUPPRESSES SPASMS OF THE GASTRO-INTESTINAL  
TRACT, GENITO-URINARY SYSTEM AND OTHER  
SMOOTH MUSCLE ORGANS**

TABLETS—in bottles of  
20 and 100

AMPOULES—boxes of  
5 and 20

1 tablet or 1 ampoule contains 0.075 gm.  
of the active substance.



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# Adrenal-Gland Products

Adrenal Cortical Extract contains the active principle of the adrenal cortex and has proved useful in the treatment of certain cases of Addison's disease. In the course of extensive research in the Connaught Laboratories on the preparation of Adrenal Cortical Extract, a highly effective product was evolved for clinical use.

## Adrenal Cortical Extract

*Adrenal Cortical Extract is supplied as a sterile solution in 25 cc. vials. It is non-toxic, is free from pressor or depressor substances and is biologically standardized.*

During the preparation of Adrenal Cortical Extract, Epinephrine is obtained as a separate product. This is the active principle of the adrenal medulla and has long been used for many purposes including stimulation of heart action, raising the blood-pressure and relieving attacks of bronchial asthma.

Two preparations of Epinephrine are available from the Connaught Laboratories:

## Epinephrine Hydrochloride Solution (1:1000)

*Every physician is familiar with the use of epinephrine hydrochloride (1:1000). It is supplied by the Connaught Laboratories in 30 cc. rubber-capped vials instead of in corked or stoppered bottles. Thus, individual doses may be readily withdrawn from the vials aseptically without occasioning any deleterious effects upon the solution left in the vials for later use.*

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*Recently considerable success has been secured in the alleviation of attacks of bronchial asthma by spraying into the mouth this more concentrated solution of epinephrine hydrochloride. This solution is supplied in bottles containing 1/5 fl. oz. (approx. 6 cc.), each bottle being provided with a dropper fastened into its stopper so that small amounts of the solution may be transferred for inhalation from an all-glass nebulizer.*

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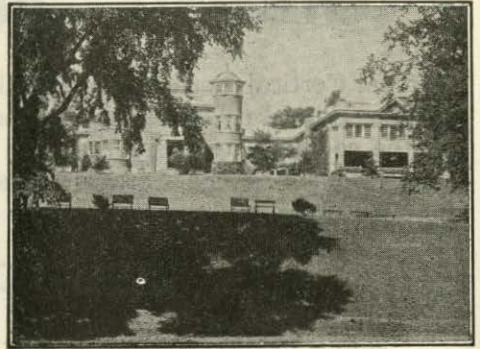
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