THE BULLETIN

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OF THE
VANCOUVER MEDICAL ASSOCIATION

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CANADIAN MEDICAL ASSOCIATION
JUNE 22—26, 1931
VANCOUVER, B. C.

Vol. VII. DECEMBER, 1930 No. 3

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THE VANCOUVER MEDICAL ASSOCIATION

BULLETIN

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Vol. VII. DECEMBER, 1930 No. 3

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VANCOUVER HEALTH DEPARTMENT

STATISTICS, OCTOBER, 1930

Total Population (estimated)		240,421
Asiatic Population (estimated)		9,335
	Rate Per 1,000 of	Population
Total Deaths	175	8.5
Asiatic Deaths	17	21.4
Deaths—Residents only	162	7.9
Birth Registrations Male 197 / Female 183	380	18.6

INFANTILE MORTALITY—

Deaths under one year of age	9
Death Rate—per 1,000 Births	23.7
Stillbirths (not included in above)	9

Cases of Contagious Diseases Reported in City

	September, 1930		October, 1930		November 1st to 15th, 1930	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Smallpox	0	0	0	0	0	0
Scarlet Fever	21	0	45	0	16	0
Diphtheria	20	1	10	0	4	0
Chicken-pox	3	0	46	0	91	0
Measles	0	0	2	0	3	0
Mumps	3	0	4	0	0	0
Whooping-cough	7	0	13	0	3	0
Typhoid Fever	0	0	5	2	6	1
Paratyphoid	0	0	0	0	0	0
Tuberculosis	19	17	19	10	11	—
Poliomyelitis	7	1	8	2	0	0
Meningococcus Meningitis	1	1	0	0	0	0
Erysipelas	4	0	4	0	1	0

in cystitis and pyelitis

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EDITOR'S PAGE

"It's the last straw that breaks the camel's back."

About two weeks ago, in a press account of a committee of the City Council dealing with the indigent, an alderman was reported to have suggested that the medical profession be asked to help by treating the indigent free. We understand that such a request may be made for consideration by the Vancouver Medical Association. The latter will, of course, decide to do what seems to it best, but there are some things that need to be said about this matter.

One hardly knows how to take such a suggestion—whether to be amused or indignant at the remarkable ignorance shown by the speaker. "How," one may ask, "have the sick indigent been looked after all this time, and how much have doctors made out of it?" We may assure him that, what with the work done by hospital staffs and private practitioners, this work has always been done free, and we hardly see how it can be done any more cheaply than this. Truly, the philosopher who defined gratitude as "a lively sense of favours to come" was not far astray.

But there is a deeper, more serious aspect to this question. For many generations the question of the medical care of indigents has remained undefined, and we have accepted it as such. Without any definite understanding on the subject, we have gone on our way, treating the sick poor free. For, and mark this, we did it of our own free will, as an act, if you will, of generosity, or of good citizenship or perhaps with some measure of selfishness as a reason. But now comes the City, and wants us to go officially on record as willing to treat the indigent sick free. We feel that this brings us face to face with a situation of the gravest importance. A number of principles are here involved.

Every doctor has his own private list of patients whom he treats free—not as charity cases necessarily, be it said. Some were once paying patients and from personal loyalty to them, or friendship or interest, he carries them on. Others, while never able to pay themselves, do loyal service to the doctor by sending him their friends as patients, and so repay him as best they can. Others he carries for various reasons. But all this is the doctor's own private business. He, presumably, receives a reward in one way or other that suits him. He has his own personal relationships with these patients, and they are important to him.

But it by no means follows that he is in any way bound to treat all indigent people free. Nor has the City or the State any right to ask him to do so. If the City is going to assume, as it has assumed, the burden of caring for the indigent, then it has no right to ask free service of the doctor, any more than of the grocer, or baker or butcher. These unfortunates are given food, clothing, and shelter, with care in time of sickness. The only one of these that is not fully paid for, is the care in time of sickness, and the only part of this that is not paid for at all is the doctor's fee. Yet the doctor pays taxes for this very thing, the care of the indigent. He pays exactly the same taxes as everyone else, even more than some, he receives no consideration of any kind, and has

nver asked for any, nor does he want any. But he *does* want and is going to insist on fair treatment.

We would suggest to the City that if it wants a definition of our attitude it would be thus: If the City is going to pay for all the other costs of the care of the indigent, it must, in fairness, pay also for medical care—either by the appointment of medical officers, or through private practitioners, who shall be paid on a scale of fees to be decided upon by agreement.

We sincerely trust that every medical man will give this matter most serious consideration. It is vital—it involves a serious principle. Our answer to any such request should be clear-cut and final. It should take into consideration the economic side of the matter, and if the City wants the situation defined, we should see to it that the definition is clear.

* * *

NOTICE

A special meeting of the Vancouver Medical Association will be held in the Auditorium, Medical Dental Building, at 8 p.m. on Wednesday, December 3rd, to hear an address by Dr. Emil Ries of Chicago, a well known surgeon and a recognized authority on surgical pathology.

* * *

NEWS AND NOTES

Dr. A. M. Menzies has severed his connection with the Laboratories of the Vancouver General Hospital and has gone East for post-graduate work in public health.

* * *

The B. C. Medical Association has arranged with the Provincial Department of Police at Victoria that the 19000 series of motor license plates shall again be reserved for medical men. This year, however, all communications for these plates should be sent *direct* to the Commissioner, Provincial Police, Motor Branch, Victoria, and NOT TO THE B. C. MEDICAL ASSOCIATION OFFICES. Full instructions have been sent to each member of the profession in the Province.

* * *

Dr. A. R. Stevenson, who looked after Dr. Colin Graham's practice while the latter was in Vienna, is now associated with Drs. McCaig, Duncan and Wiley at the Sault St. Marie Clinic, Ontario.

* * *

Dr. Sheffield (formerly of Coalmont, B. C.) has accepted an appointment in the Department of Pensions and National Health, at Shaughnessy Military Hospital.

* * *

Drs. J. H. MacDermot and D. E. H. Cleveland have been appointed President and Secretary respectively of the Greater Vancouver Health League. The League has an office in the Medical Dental Building, under the care of Mr. Court.

MEETINGS

The Vancouver Medical Association held a Luncheon at the Hotel Vancouver on Friday, November 7th, to welcome Dr. A. K. Haywood, superintendent of the Vancouver General Hospital, who took up his duties on the first of the month. The luncheon was attended by more than a hundred members and was a very pleasant function.

* * *

The November General meeting of the Association was held on the 4th. The speaker of the evening was Dr. J. G. McKay, who addressed the members on the "Early Recognition and Treatment of the Psychoses." Dr. A. L. Crease was to have spoken on the same subject but was unavoidably prevented from attending the meeting. Dr. McKay's paper was discussed by Drs. Irlma Kennedy, R. E. Coleman and F. J. Buller. Fifty members were present.

Drs. H. R. L. Davis, C. A. Eggert, S. G. Elliott, A. T. Henry, J. W. Shier, R. Miller-Tait and T. R. Whaley were elected to membership.

Dr. Busteed, Chairman of the Library Committee, moved a resolution that a portion of the Summer School surplus be placed at the disposal of the Treasurer for Library purposes. The resolution carried unanimously.

* * *

The first meeting of the Clinical Section was held on October 21st. Sixty-three members were present. The first case was one of paresis of the hand following an injury in the region of the elbow shown by Dr. T. H. Lennie. The point in discussion of the case was whether the paresis was of organic or functional origin. Dr. Greaves was able to demonstrate very clearly, by means of electrical stimulation and a short history of progress of the condition under this treatment, that the paresis was functional rather than organic.

Dr. G. F. Strong next presented a case of lung abscess, with treatment and autopsy report given by Dr. H. H. Pitts. Dr. Strong first gave a short resume of the aetiology of lung abscess in general, as follows: (a) Post-operative; (b) Post-pneumonic; (c) Bronchiectatic; (d) Foreign body.

The case was one of suppurative pneumonitis following a bronchopneumonia localized to a single patch in the lower lobe of the right lung. The patient, a logger, age 21, had spent several days on the beach in a bathing suit, sunning himself, prior to illness. On August 12th, while at the beach, he developed a pain in the right lower chest on inspiration. He went home to bed but pain continued and he was admitted to the hospital on August 13, 1930.

Physical examination showed a well nourished and developed young male whose respirations were shallow. Left chest negative. Right chest showed physical signs which led to diagnosis (provisional) of pleurisy with effusion. Two weeks later X-ray showed area of consolidation in central portion of right lower lobe. Diagnosis was then considered possibly a central pneumonia. A day or so thereafter, however, he began to have a foul sputum which increased rapidly in amount until he was bringing up three cupfuls daily. Temperature was sustained at 101°. It was decided to follow the method of treatment of Dr. Rich of Detroit who says that if early collapse of the lung in these cases is done then the period of illness may be greatly shortened. Artificial pneumothorax was induced September 18th, five weeks after onset of illness and three weeks after pus appeared. Air was introduced four times at two or three day intervals, but it was found by X-ray that an adhesion at the base of the lung was holding it out. However, the patient felt better and his sputum decreased. Bronchoscopy was considered but he appeared to be draining well so it was deemed advisable

not to interfere. Ten days after collapse there was a sudden increase in pain, a sharp rise in temperature and patient became very toxic. He developed signs of an empyema in the right chest and died in three days.

In discussion of this case, Dr. Strong said that Rich, of Detroit, had treated eight cases in this manner with six cures. Other literature on the subject shows the mortality to be high.

At autopsy a large quantity of pus was found in the pleural cavity and also a tremendously increased air pressure. A communication with the abscess cavity was found to be probably due to tearing of the lung by the restraining adhesion at the base during artificial pneumothorax. Subsequently air was pumped into the pleural cavity by the valve-like action of the tear during inspiration and expiration, thus accounting for the greatly increased pressure in the pleural cavity.

Dr. C. H. Vrooman presented three cases:

Case 1—F. E. C., age 53, leather worker, no serious illness all his working life until last February. Taken acutely ill in February with acute pain in side and fever. In bed about ten days. Slight cough after going back to work—gradually became worse. Some pinkish sputum—had to go back to bed for a few days. This happened again about May 1st, when cough left for a time, again June 1st and 24th. Rather thin man weighing 110 lbs. P. 84, Temp. normal. Chest showed right slight dullness and definite basal rales. X-ray showed at base of right lung a definite opacity the size of a small pea extending from hilus into parenchyma of lung. Examination of other systems negative. Sputum repeatedly negative to T.B.

Diagnosis—Lung abscess or lung tumour.

Treatment Pot. Iod. gr. t. i. d. and postural drainage. The man continued at light work and reported at intervals for examination. September 24th—reported cough had disappeared for four weeks. Examination of lungs negative. X-Ray shows almost complete disappearance of tumour mass shown in first plate. There were some fibrous strands and a definite pleural line between lower and mid lobe.

Case 2—E. J. W., male, age 27, farmer.

First seen August, 1928 with a history of having aspirated a chicken bone one month previously. About a week ago started to raise very foul pus. Felt sick and miserable. Examination showed dullness and many moist rales upper left lung. X-ray showed very definite mottling almost suggestive of T.B. over upper part of left lung. Repeated sputum tests negative for T.B.

August 20, 1928,—Dr. H. M. Cunningham examined patient with bronchoscope—failed to find any foreign body.

September 12, 1928—Patient discharged from Vancouver General Hospital feeling good, very little cough or sputum, good condition. Showing marked improvement, continued to improve until February, 1929, when he coughed quite suddenly a half pint of blood and had some recurrence of foul sputum for a time. Spent summer of 1929 at Field and was able to work, though coughing some foul and pinkish sputum occasionally.

August 19, 1929—Coughed about a pint of blood. In St. Paul's Hospital about two months—returned home still coughing foul sputum but general condition somewhat improved. Sputum so foul that his friends could not have him in the house. Admitted to Vancouver General Hospital February 21, 1930. Temperature 100° to 101° daily until about May when he coughed about another pint of blood. Consultation with Dr. Schinbein in May re thoracoplasty, decided to try pneumothorax first. Pneumothorax induced in May, followed by some improvement, lower half of left lung was collapsed—unable to collapse upper half on account of adhesions. Showed some improvement but still had some temperature and coughed considerable pus. Transferred in August to service of Dr. Robertson who tried vaccine treatment. Patient continued to show improvement, cough has now become much less, general condition much im-

provide. X-ray showed definite lesion in left apex with small cavities. The case was presented as one now suitable for thoracoplasty as giving the best hope of permanent result.

CASE 3—A. McD., age 48, quartz miner for 15 years.

No history of any previous serious illness. Seen first July 14, 1930. Worked until two months previously when he caught cold and had to go to hospital at Anyox. Coughed a good deal of foul sputum, lost weight and strength. Average weight 165 lbs. weight in July 145 lbs. Physical examination shows extensive dullness over whole right side with many moist rales. X-ray showed uniform mottling of whole of right lung, no definite abscess cavity. From clinical findings and X-ray, diagnosis made of probable multiple abscesses of lung following pneumonia.

In September, pneumothorax induced with collapse of lower half of lung. After this patient's condition improved steadily—sputum decreased from five ounces to about one ounce daily. Foul odour disappeared to some extent. Temperature normal for six weeks—patient steadily gaining weight. The question of course remains whether there will ultimately be healing of abscess cavities or will a thoracoplasty have to be done eventually.

DISCUSSION

Dr. Whitelaw spoke of the difficulty of X-ray diagnosis in these cases. He believed that Dr. Strong's case was an aspiration of contaminated water followed by abscess. This type usually occurs in lung hilum and extends outward to periphery where the pus may break through into pleural cavity. A second type is the pneumonic type which by reason of the mode of entry is nearly always peripheral. Dr. Whitelaw felt that an abscess which would not yield to treatment in three months would never heal without surgical intervention.

Dr. Vrooman's case, he said, was the pneumonic type, with multiple abscesses and adhesions over upper lobe.

Dr. Schinbein stated that dogmatism in lung conditions was to be condemned and no matter what the treatment, the mortality is high. He believes that lung abscess, as well as brain abscess, frequently follows surgical procedures. Abscesses which evacuate themselves and do not bleed, should be treated conservatively with rest and forced feeding and postural drainage. Most of these recover readily, but if no improvement, or bleeding takes place, other measures must be tried such as artificial collapse of lung. Some of these will recover, those that do not may have extra-pleural thoracoplasty. In abscesses of the base phrenicotomy may be tried first and some of these are successful. Occassionally an abscess may have to be drained from without (a peripheral abscess). Dr. Schinbein mentioned experiments which have been carried out at Mayo's to determine whether cases of suppuration in chest post-operatively are embolic in origin or due to inspiration. Dogs were anaesthetized and dye placed in mouths, some lying flat, some with head up, and others head down. Those in Trendelenberg position showed no dye in bronchi while those in other positions did. Incisions in abdomens of other dogs were covered with dye and dye was recovered in the lung. Therefore two aetiological factors are possible, emboli and aspiration.

Dr. Schinbein also spoke of lobectomy by the cautery method of Graham and lobectomy with tying off of the pedicle.

Dr. E. E. Day mentioned a patient of Dr. Archibald's, of Montreal, who had a button in lung three years. Button removed, abscess continued in spite of bronchoscopic treatment, and after five years lobectomy was done. In Dr. Ballon's Clinic, Montreal, cases were treated by bronchoscopic drainage and instillation of lipiodol every two weeks. Most of these cleared up slowly, but might have done as well on other treatment.

Many cases of lateral sinus thrombosis develop lung abscess. This was mentioned in support of the embolic theory. Dr. Day thinks some cases of lung abscess can be kept much more comfortable by bronchoscopic treatment.

Dr. Keith remembered many cases which were called gangrene of the lung (really abscessed), which were left alone and got well. He believed that *no* treatment is possibly *good* treatment. Any case in which is is difficult to introduce the bronchoscope is beter treated conservatively.

Dr. Vrooman, in closing, stated that the pleural cavity absorbs air with varying rapidity in different individuals. Usually 50 cc. are absorbed daily. Therefore 500 cc. of air introduced into cavity every nineteen days replaces the quantity absorbed. The amount introduced at a time is judged by manometer pressure. It is better not to give a positive pressure. If pain is complained of during introduction of air it is dangerous to continue. Usually this means adhesions and the manometer wlil show the pressure.

Dr. A. W. Hunter presented a rare and interesting case of rhabdomyoma of the scrotum, and Dr. H. H. Pitts showed the specimen and micro-photograph slides of it.

* * *

INTERPRETATION OF GASTRIC SYMPTOMS

A clinical and roentgenological study of three thousand cases.

By MAURICE F. DWYER, M.D.
Seattle, Wash.

It is a well-known truth, that the majority of patients consulting a physician on account of gastric symptoms, do not have organic gastric disease. Four years ago we presented a statistical study of 1,650 patients complaining of chronic dyspepsia. We have continued this investigation and believe that it may be of interest to present briefly the conclusions drawn from a routine examination of 3,000 consecutive patients, requiring a gastro-intestinal examination before a final diagnosis could be reached. Such an examination included the taking of the clinical history, physical examination, roentgen gastro-intestinal study, the usual routine laboratory tests, and other roentgen and laboratory examinations when indicated. The final diagnoses have been made only after careful correlation of all clinical, laboratory, and roentgen evidence.

Errors in diagnosis undoubtedly exist; yet we feel that the same percentage of errors in the various diagnoses are fairly constant, hence the figures are relatively correct. It is now very probable that after a careful

routine examination less than 10 per cent of patients' major complaints are wrongly diagnosed.

In the study of 3,000 consecutive histories of patients having a gastro-intestinal examination, 450 (or 15 per cent) received a diagnosis of organic gastric lesions. These 450 diagnoses comprise 295 duodenal ulcers, 57 gastric ulcers, 92 gastric cancers, 2 cases of gastric syphilis, 3 cases of benign gastric tumors, and 1 gastric hair-ball. Extra-gastric conditions are by far the chief causes of stomach trouble. In 85 per cent of the series the stomach was found *not* to be the primary cause of the dyspepsia.

Duodenal ulcer is the most frequent lesion of the stomach or the duodenum causing gastric symptoms and comprised 65.7 per cent of the organic gastroduodenal lesions and 8.1 per cent of the number of patients complaining of gastric symptoms. In this series the average age of patients suffering with duodenal ulcer was forty-one years. Fifty-six per cent stated that the onset of their present gastric complaint began before the age of twenty-five, and 25 per cent before the age of twenty. The diagnosis of duodenal ulcer depends upon two salient factors: carefully obtained clinical history and proper interpretation of x-ray findings.

It is relatively rare for the roentgenologist to demonstrate an ulcer without at least a suggestive clinical history, and, conversely, the roentgen report, when returned to the clinician, seldom disappoints him if he has sufficient clinical evidence to cause him to suspect strongly the presence of an ulcer. When frequent differences affecting the final diagnosis arise betweeen these two departments, they are generally due to an unbalanced ratio of proficiency or to a lack of confidence in one another's judgment.

A study of 100 consecutive clinical histories of duodenal ulcers showed that 82 per cent gave the so-styled "typical duodenal ulcer history,' and 14 per cent a suggestive history, which may or may not have meant ulcer. The so-called typical history of duodenal ulcer is of great importance, and we wish in no way to detract from its high value in the diagnosis of such a lesion, but if one depends solely on the history many ulcers will remain undiagnosed or confused with other abdominal conditions, causing gastric symptoms, as 18 per cent of the cases studied gave anything but a classical history. In those cases with definite ulcer symptoms the roentgenologist is of great value in confirming the diagnosis. In the group presenting suggestive and indefinite histories the roentgenological examination will determine or exclude more ulcers than the combination of all other diagnostic methods.

Gastric ulcer was diagnosed 57 times in this series and comprised 12.6 per cent of the organic gastroduodenal conditions—one fifth as common as duodenal ulcer. The average age at the time diagnosis was made was forty-eight years. In comparing the histories of gastric and duodenal ulcer patients, it was interesting to note that only 36 per cent sought relief before forty-five years of age, 25 per cent before the age of twenty-five years, and only 3.5 per cent stated that their stomach bothered them before the age of twenty. Gastric ulcer, in comparison with

duodenal ulcer, is essentially a disease of older persons. Seventy-five per cent dated the beginning of their trouble after the age of twenty-five.

The clinical differentiation between gastric and duodenal ulcer is frequently difficult, as many gastric ulcers are atypical and present an indefinite history. Here the roentgenologist localizes the lesion and occasionally is able to establish the presence of an ulcer when the clinical signs and symptoms are highly inconclusive.

The largest percentage of gastric ulcers occur along the lesser curvature, extending slightly on to the posterior wall. If these ulcerations are more than mucosal erosions, their direct presence will generally be recognized. It must be remembered, however, that approximately 16 per cent of gastric ulcers are located on the posterior wall, a considerable distance from the curvature, and unless the roentgenologist is constantly on his guard and employs as a routine the method advocated by Carman for examining the posterior gastric wall, many posterior ulcers will be overlooked.

Next to duodenal ulcer, cancer is the most frequent lesion of the stomach and duodenum. Ninety-two patients in this series suffered from cancer of the stomach. Twenty per cent of gastroduodenal conditions and 3.5 per cent of general gastric symptoms were found to be due to cancer of the stomach.

The problem of cancer becomes of more interest daily, both to the profession and to the public at large. The stomach has the distinction of being affected more frequently with carcinoma than any other organ of the body. Cancer of the stomach is not often cured. The disease can be removed and recurrence prevented only by surgical treatment. The problem here is the same as cancer eleswhere, to discover the earliest signs and syptoms whereby the patient may be afforded the only possible chance for a cure, an early resection. This fact is well known, yet how seldom does one see an early gastric carcinoma?

Recently we carefully reviewed one hundred cases of gastric cancer, and although nothing particularly new was brought out we felt justified in re-emphazing some important facts concerning such a relatively common condition, the incidence of which is apparently on the increase.

The most common lesions of the stomach and duodenum bear approximately the following ratio: gastric ulcer 1, gastric cancer 2, and duodenal ulcer 5.

The symptomatology of gastric carcinoma has been described too often to need more than brief mention. The constant discomfort, food distress, distaste for food, loss of weight, nausea and vomiting, haematemesis and anaemia are all relatively late symptoms of the disease. They are clinically important but do not often bring the patient in for examination early enough to allow successful palliative or curative surgery.

We have reviewed in detail our clinical histories to determine the earliest syptoms of the disease noted by the patients. Localized gastric symptoms described as distress, pain, soreness, or pressure have been the first symptoms noted in two thirds of all our cases. Vomiting (8 per cent)

or loss of appetite (7 per cent) were the initial symptoms in 15 per cent more. In one fifth of all cases the early symptoms were not referred by the patient to his stomach. Loss of weight and strength were noted as the earliest symptoms in five instances. Dysphagia was the first symptom noted in two cases, and diarrhoea in one case. A few patients were unable to recall their first symptoms, or we failed to note them.

Loss of weight is not often considered by the patient as of serious significance. Three fourths of our patients had lost more than 20 pounds (9 Kg.) before coming for examination, and many had lost enormously. The weight loss of seventy-nine patients about whom we have accurate figures totalled considerably more than a ton, or nearly 30 pounds (14 Kg.) per patient. Only two patients remembered weight loss as the first symptom, and only twenty considered it a prominent symptom.

Nausea and vomiting was a prominent symptom in more than half of all patients. Haematemesis was considered of major importance by only two patients, and recorded in only eleven histories. Nausea, vomiting, and haematemesis are not common early symptoms, but are noteworthy symptoms in more than half of all patients by the time they come in for examination.

Loss of strength and loss of appetite are not common early symptoms but have been prominent symptoms in about one-third of the patients by the time the history was written.

A gastric mass was complained of by the patient in only six instances, yet forty-one had a palpable mass present.

Any detailed study of the histories of patients suffering from gastric cancer rapidly brings out two distinct groups. The larger group does not give any history of stomach disturbances prior to the onset of the symptoms of cancer or the present complaint; while each case of the smaller group gives a history of long-continued gastric disturbances prior to the onset of the present symptoms.

The larger group of cases gives a history of an onset of symptoms so insidious that it is difficult to recognize the exact beginning. Yet the beginning is not remote, and the progress of the disease has been rapid. Such patients usually state that there has not been any trouble with their digestion and that they have enjoyed vigorous health. Their present increasing gastric symptoms have averaged only eight months. Examination of these patients shows with a remarkable uniformity a total lack of free hydrochloric acid and a large filling defect. It is interesting to note that the filling defect is less often in the pyloric region (44 per cent) than in the upper portions of the stomach (56 per cent). Such cases include two thirds of all patients suffering from gastric carcinoma. In our series, 62 per cent of all cases come into this group; they had not had any gastric symptoms preceeding the beginning of their complaints; and in only two instances was even a trace of free hydrochloric acid discovered. Thirty-seven patients in this group who had gastric analyses recorded and in whom the original site of the growth could be located with reasonable certainty presented sixteen pyloric lesions, fifteen body lesions, and six cardiac lesions.

The smaller group of cases give a striking contrast in having a longer early history of gastric disturbances. The history of dyspepsia runs bask over an average of ten years before the onset of the symptoms of cancer. The old history may suggest chronic cholecystitis, a functional type of hyperacidity, or other gastric disturbance, or a more or less typical syndrome of gastric ulcer. Approximately one-third of all cases presented such a history, and these have been carefully reviewed. Gastric analyses (thirty-one cases) have shown that 70 per cent of these show free gastric acid, and occasionally even high gastric acidity. In thirteen instances the histories have been classified as either a story of cholecystitis or an irregular gastric history; five of these presented free hydrochloric acid, averaging free hydrochloric acid 10, while free acid was absent in nine. In twelve instances the history has been classified as probable old ulcer, and in every instance analysis has shown free hydrochloric acid averaging 24 degrees. In six cases the history is so typical of gastric ulcer that a tyro should make the diagnosis; each presented free hydrochloric acid, averaging a free hydrochloric acidity of 42 degrees. In studying eighteen patients in this group who had free acid and in whom the original site of the growth could be reported with reasonable accuracy, we find that fifteen originated in the pylorus, three in the pars media, and none in the cardiac end of the stomach. Stated differently, eighteen cases in which there were long histories of dyspepsia and later development of gastric cancer with free acid present show 83 per cent pyloric origin and 17 per cent pars media origin, or 100 per cent below the cardia. By contrasts, thirty-seven patients with short clinical histories and gastric cancer with achlorhydria show 44 per cent pyloric origin, 39 per cent body origin, and 17 per cent cardiac origin, more than half originating above the pyloric region.

The three cases of benign gastric tumors which were found taught us that one must continuously bear in mind that a benign gastric tumour although rare, may be the cause of an atypical gastro-intestinal complaint or an unexplained chronic anaemia. The first case was a leiomyoma; the second, five very vascular mucous polypi; the third, a large fibromyoma. In reviewing these three cases of benign tumours of the stomach we were impressed by the absence of gastric symptoms. All the patients complained of weakness, anaemia, and loss of weight, but none attributed his ill health to a lesion in the stomach. Diarrhoea was present in two cases. In the patient having the polypi, diarrhoea was practically the sole complaint. After removal of these polypi the diarrhoea stopped and has remained so to date, eighteen months after the operation. All the tumours found in these patients were located on the posterior wall of the stomach. One case in all probability would not have been diagnosed had we not made it routine to carefully palpate the partially barium-filled stomach during fluoroscopy.

We believe that gallbladder disease is the most common cause of stomach symptoms, and have carefully tabulated our findings relative to this statement for the past ten years. In 1924 we reviewed 1,650 consecutive histories of chronic dyspepsia, and gallbladder disease was diagnosed in 19.3 per cent of the series. In 1926 the study was increased to 2,225 patients, and the percentage of biliary tract disease was found to be 20.4 per cent. In reviewing 3,000 cases the gallbladder and ducts

are considered responsible for the symptoms in 21.3 per cent. This percentage remains fairly constant throughout the entire series. The incidence of gallbladder disease is one-third greater than that of all the organic gastro-duodenal lesions together. Owing to the fact that gallbladder disease is such a relatively common condition and that, for the past few years, so much investigation has been done regarding this organ, a review of some clinical aspects of the disease may be of interest.

Dowling, reviewing the gallbladder diagnoses in our clinic up to January 1, 1928, noted that 1,004 patients out of a total registration of 26,500, received a diagnosis of disease involving the gallbladder or bile ducts. This is an incidence of 3.8 per cent. Only 8 per cent of the total registration was under the age of fifteen, so that, for practical purposes, this may be considered a group of adults. The history of gallbladder disease is the most important single factor in the diagnosis. This review showed that the early and prominent symptoms were dyspepsia in 64.5 per cent and pain in 35.5 per cent of cases.

An analysis of the term "dyspepsia," as applied to biliary tract diseases, showed that the most common complaints were gas, distention and belching, food selection, sour stomach and heartburn, bilious spells, acid eructations, headaches, and constipation, Vague abdominal and chest pains were frequently noted. Soda relief was not uncommon, and abstinence from food generally gave relief.

Al these symptoms may be found in dyspepsia from other causes, but their association in a group, accompanied in at least one-third of the cases by occasional severe radiating epigastric pain, in another third by less severe pain, by occasional jaundice and septic symptoms with acid frequently absent or low, and a negative roentgenologic report of the organic gastroduodenal conditions, makes the diagnosis correct in over 90 per cent of those checked by operation. To these add the positive aid of cholecystography and the diagnosis of gallbladder disease becomes as accurate as of other gastro-intestinal lesions. The operative findings have agreed with the preoperative diagnosis in over 90 per cent of the cases.

A recent study of 200 consecutive case histories of patients receiving a diagnosis of gallbladder disease to determine the degree of gastric acidity showed that 70 (or 35.5 per cent) had a normal amount of acid; 41 per cent low acid; and 47 (or 23.5 per cent) absence of acid. Thus 64.5 per cent had low or absent acid. No record was found of any of these 200 patients who had high acid. Since this study was made we have record of one patient having high acid, on whom a diagnosis of gallbladder disaese had been made. Low or absent acid in a patient with chronic gastric disturbances speaks strongly for gallbladder disease, and the clinician should not be hasty in diagnosing disease of that organ in the presence of high acid.

Cholecystography has been used for the past five years practically as a routine method of examination, in all cases suspected of having gallbladder disease. We have studied over 1000 patients by this method and are convinced that cholecystography far surpasses all previous objective means of examining the gallbladder. After trying both oral and intraven-

ous methods of administering the dye, the intravenous is preferred and has been used exclusively for three years.

Cholecystography is purely a functional test of the gallbladder. Positive evidence of gallbladder disease, such as absent or persistently faint concentration of the dye, speaks more for impaired function and disease of that organ than any other method of objective examination. On the other hand, a well visualized gallbladder does not by any means rule out gallbladder disease, as the organ may be markedly diseased and still retain the power of concentration.

The clinicians have diagnosed gallbladder disease in 12 per cent of the cases giving negative cholecystographic findings.

General neuroses and the various functional dyspepsias bring more patients to the physician than any other type of indigestion; no patients require more careful diagnosis. The neurotic, fat female of forty, with an indefinite dyspepsia as part of a long line of complaints, will cause a great deal of worry for the conscientious physician. Such women often have gallstones, and these are found by cholecystographic methods, even when they are responsible for only a small portion, or for no portion, of the patient's complaint. Such patients do not get symptomatically well after cholecystectomy.

The thin, gassy, debilitated female of forty may show occasionally no cholecystographic shadow at a first examination, yet at a second examination we may find a normal gallbladder shadow, or operation may show an apparently normal gallbladder. This fact has been noted by us and has been reported by Eusterman, Such failure to visualize the normal gallbladder must be due to some temporary functional failure of the normal gallbladder to concentrate the bile.

Functional disturbances have often been diagnosed as due to organic disease, and patients with gastric organic dyspepsia may have an overshadowing functional disturbance. For this reason we feel that close cooperation between the roentgenologist and the internist is essential to the attainment of a high percentage of finally accurate diagnoses.

The combined diagnoses in our clinic of all organic lesions of the stomach, duodenum, and gallbladder total only one-third of the number of those who have had digestive symptoms sufficient to warrant a gastro-intestinal or cholecystographic examination. Two-thirds of all dyspeptics have had their stomach symptoms secondary to extra-gastro-cholecystic disease or to functional derangement.

SUMMARY

1. Fifteen per cent of patients complaining of chronic gastric disturbances have organic conditions in the stomach or duodenum, accounting for the symptoms.

2. Duodenal ulcer accounted for the symptoms of 8.1 per cent of the total series and the most frequent organic finding in the stomach and duodenum. Fifty-six per cent of the patients stated their gastric disturbances began before the of twenty-five

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3. Gastric ulcer is one-fifth as common as duodenal ulcer and is comparatively a disease of older individuals. Seventy-five per cent began to have stomach symptoms after twenty-five years of age.

4. Twenty per cent of organic gastroduodenal conditions and 3 per cent of general gastric symptoms were due to cancer of the stomach. Eighty per cent of these cancers apparently originated in a resectable part of the stomach. Early pyloric obstruction is a fortunate complication, because it brings the patient in early for relief.

5. Sixty-two per cent of the patients with gastric cancer described their earliest symptoms as pain, soreness, or pressure, and 15 per cent as vomiting or loss of appetite; 23 per cent did not believe that the stomach was the cause of their illness.

6. Seventy-five patients lost more than 20 pounds (9Kg.) each before coming for examination, yet only two remembered loss of weight as an early symptom and only twenty considered it a prominent symptom.

7. A gastric mass was complained of by the patient in only six instances, though forty-one had a palpable mass present.

8. Sixty-two per cent did not give a history of stomach trouble prior to the onset of the cancer symptoms, yet this onset is so insidious that it is difficult to recognize the exact beginning. The average duration of their complaint was eight months.

9. The examination of the group of gastric cancer patients presenting short histories showed with a remarkable uniformity a total lack of free hydrochloric acid and definite roentgen evidence of large filling defects.

10. The smaller group, comprising 38 per cent of the series, gives a striking contrast in having an early history of much longer duration. They gave histories of gastric disturbances averaging ten years before the onset of the symptoms of cancer.

11. Seventy per cent. of the smaller group had free hydrochloric acid present, some in excess of the normal. Eighty-three per cent of the patients presenting long histories and the presence of free acid had the tumor located in the pyloric region, compared with 44 per cent of the group with short histories and absent free acid.

12. Gallbladder disease is the most frequent organic cause of gastric symptoms. We believe the gallbladder was responsible for the dyspepsia in 21.3 per cent of the total series. Positive cholecystographic findings by the intravenous administration of the dye speak volumes for disease of the gallbladder. Negative cholecystographic findings in the presence of a good clinical history of gallbladder disease and a negative roentgen report of the stomach and duodenum should not prevent the clinician from diagnosing disease of the gallbladder.

13. In 59 per cent of all cases presenting gastric symptoms the cause for the dyspepsia was not due to functional or organic conditions in the stomach, duodenum, or gallbladder.

CORRESPONDENCE

To the Editor,

Vancouver Medical Association Bulletin.

Dear Sir:

The following notes are based upon the discussion of an article read at the June meeting, 1923, of the Canadian Public Health Association held at Edmonton, Alberta, and published in full in the Public Health Journal of December 1923 and January 1924. These remarks also bear upon the correspondence between Drs. H. W. Hill and J. E. Campbell published in "The Bulletin" last year.

The idea advocated in the article in the Public Health Journal is that a positive Wassermann means protection, and, of course, the natural conclusion would be that instead of endeavoring to obtain a negative result in the treatment of our syphilitic patients we should treat our patient for his syphilis by building up and keeping up his natural resistance. We all know that our life span is determined by our ability to protect the body from enemies from within and enemies from without. Our serological tests, other than in syphilis are to determine the presence or absence of protective changes against certain pathogenic invaders. We endeavour to imitate these changes, *i.e.* to produce protective substances as in typhoid, scarlet fever, small pox, etc. by the use of vaccines, and to get quick action by the use of serums—diphtheria, etc. by adding the protection—on the other hand nature has made one very serious blunder (or have we made it?) in the case of syphilis:

> "A positive reaction, as has been noted, means the presence in the body of living treponemas, and as long as the reaction remains positive, just so long is the patient a victim of syphilitic infection, regardless of the occurrence of other symptoms of the disease."

These are the teachings upon which our present treatment of syphilis is based. There is no necessity to further point out that the treatment of spphilis is actually guided by the Wassermann reaction, that a positive means treatment and a negative Wassermann none. Who is there in the profession who does not implicity believe that a positive Wassermann is an absolute indication for further treatment? Statements such as the following run riot throughout our classics on serology. "Treatment in syphilis should never be discontinued until the Wassermann test has become negative unless it is found that the case is Wassermann fast, i.e. that no amount of treatment will cause the reaction to become negative."

That surely means, if it means anything, to treat the Wassermann and let the rest of the man go by. That surely is the basis of treatment as generally followed.

I would suggest we, as a profession, seriously think this matter over—reverse our idea of the meaning of the Wassermann and Kahn reactions—work our problems out on the principle of the Wassermann being a measure of protection—and, although many seeming contradictions may appear, yet by sticking to the principle a new and clearer

vision will enter our consciousness, not only in the treatment of syphilis but all medical problems.

Our legislators are honestly struggling with the health problem, which is a bewildering one. The heads of our Health Department are doing all they can and relying on the rank and file of the profession to give of their best, and the best cannot be attained by prejudice or the absence of an open mind.

I shall never forget the quandary one of our profession found himself in after listening to a talk at a neighboring Medical Association meeting when the speaker stated that:

a. A patient may have a positive Wassermann and still be cured of his syphilis.

b. That another patient may have a four plus and still be greatly in need of treatment.

These apparent contradictions are still quite true. Work this problem out on the principle of a +1 positive Wassermann meaning protection and the result is self evident. As an illustration:

We have two automobiles, A and B, with a difficulty to overcome or an enemy to vanquish which we call C and which is Shaughnessy Hill (any hill will do) from 15th to Angus Drive. Both A and B have their full complement of gasoline, lubricating oil, well greased and machinery in perfect working order. A starts at scratch and at the top of the hill is making 50 miles an hour. B starts at scratch, stalls half way up the hill is forced to back down and get a flying start. Why this difference, in overcoming their enemy C? Both plus or all the power they can develop, one requiring no help, the other a flying start. The enemy's resistance was not sufficient to deter A but did show up the weak spots in B. B required the tonic of a "flying start," so, with our patients, some require considerable building up, others none.

It is very gratifying to read articles such as appeared on page 289 of The Canadian Medical Association Journal under date of March 1929, "Specific Treatment of Syphilis." In this it is to be noted that our present intensive specific form of treatment is not indulged in. The results are rather interesting. 0.6% of general paresis cases, compared to 4%, as generally accepted under usual specifics, or better by almost 7 to 1.

Dr. Bruusgaard remarks: "Evidently in a considerable number of cases the body is by itself able, not only to arrest the process of syphilis but even to eradicate the disease." At this point it may be interesting to recall the disappearance of primaries and secondaries which have come to our attention in many patients, and to ponder the probable cause of such disappearance of symptoms and our previous ideas of treatment must be revised, to understand why others with these symptoms not only do not improve but actually grow much worse.

The article then goes on. In syphilis, like any other disease, we must recognize the natural resources of the body as a very material aid to any specific therapy we may employ, and this idea not new."

Then again a very important point is noted, "In both our material series and our tryparsamide series the relief of symptoms which took place was subsequent to the physical betterment of the patients. They first began to gain in strength, to increase in weight and to show a normal appetite. In watching their recovery, one was strongly reminded of the way in which the body recovers from wasting diseases. That is to say, the whole picture during recovery seems to be due to the marshalling of the resistive forces of the body rather than to a direct spirochaeticidal action. Had our Victoria friend thought of his plus Wassermann case badly in need of treatment (Car) climbing the Malahat and again the case (car) of the plus Wassermann requiring no treatment, gliding adong the level Duncan road, he would have least have had some peace of mind and a rather fair explanation of his problem. A few days ago a patient called at our Government Dispensary suffering from progressive G.P.I. He had a double plus Wassermann upwards of two years previously, all negative serological tests since, and regular intensive treatment since his first visit. Too late then for tonics, etc., for so far as I am aware tonics do not materially help scar tissue; if they did what a wonderful boon they would be to our surgeons and then we could hope for a real family pact with our internists.

It may be well to remember that probably a drug which is bacteriotropic is also organotropic, that a drug continued gradually loses its effect, as a result, no doubt, of the formation of anti-bodies. The French, some years ago, showed that this actually took place upon the administration of "606" and allied preparations.

Without malice aforethought, with an open mind, clean hands and a pure heart it might be well for all of us to re-consider our entire system of treatment of syphilis and at least give some reasonable reason for the faith that is in us to our public health organizations and our legislators who are backing our efforts.

This viewpoint necessarily implies that most value must be placed on clean living. Syphilitic patients are very prone to indulge in alcohol, while those with V.D.G. are proverbial for their anxiety for early indulgence of their sensual instincts. The one probably, due to depression reaching for a whip rather than for oats; the latter undoubtedly from irritation, or shall we say stimulation.

It would seem that our treatment in the great majority of instances has been weighed in the balance and found wanting if we have neglected to appreciate our patient's thoughts, his words, his actions and his habits. For each follows the other as cause and effect and we must emphasize the importance of cleanliness and self control.

Some controversy of late has existed whether or not the Kahn Test would not be preferable to the Wassermann in the diagnosis and as a guide to the treatment of syphilis. With the present mode of treatment would it not be very dangerous, as it seems the Kahn is much more sensitive and can actually be carried out in office practise by the physician administering the treatment. On the other hand we would have a ready means of judging our patient's pulling power, his power of protection, through comparatively simple office means and thus check up the rises

and falls of resistance. With such a ready means at our disposal combined with physical symptoms and providing always that the result of our tests meant to us (serological, physical and mental) a measure of the degree of protection, we should be in a position to treat and advise our patient as to his habits of life and avoid the onus of entire responsibility for a cure when we feel that we are not having the support we should have in the co-operation of our patient.

It is pitiful the confidence placed in treatment by drugs alone and the relief of the patient when he asks "is my blood pure yet" and he sees a negative Wassermann. I feel certain that it is nothing short of a calamity to doctor, patient and comunity to persist in the present idea that a "plus Wassermann" means living spirochetes.

In conclusion, allow me to refer those interested in the treatment of lues to the July issue of "The British Journal of Venereal Diseases." This issue deals exclusively with the problems of syphilis. Many red herrings will be found to cross the trail during this perusal but at least two outstanding points seem to be emphasized viz.

1—Drugs used in the treatment of syphilis do not attack the spirochaeta pallida directly but rather by stimulating the production of protective substances in the blood stream of the host.

2—Careful supervision of the general health of the patient must be exercised in order to maintain his resistance at the highest point possible.

J. J. Gibbs.

* * *

SIGNIFICANCE AND TREATMENT OF HEMATEMESIS

By Dr. W. F. Cheney, San Francisco.

There are four causes of this condition that stand out prominently. (1) Ulcer of the Stomach or Duodenum; (2) Cancer of the Stomach; (3) Cirrhosis of the Liver; and (4) Splenic Anaemia. Compared with these, all other possibilities are far less frequent.

I. Ulcer is the most common cause of hematemesis, but statistics show that hematemesis occurs in only 10 to 25 per cent. of all cases of ulcer. It should be classed, therefore, as a complication and not as a symptom. The vomited blood comes most often from a gastric ulcer, but many occur from a duodenal as well. Bleeding undoubtedly is more common but not in sufficient amount to be vomited.

There are certain rules for guidance in deciding about the significance of hematemesis: (a) When in doubt, assume ulcer as the cause until some other source has been proven; (b) an ulcer history usually precedes, but ulcer may be latent until hematemesis occurs; (c) the quantity is variable and the amount vomited does not always indicate the seriousness of the situation; (d) one haemorrhage is frequently followed by others, with a day or two interval, and it may start as a simple oozing or discharge of a small amount of bright blood, or the

first one may be so large as to prove fatal; (e) death from a first attack of hematemesis is rare but does occur from erosion of a large vessel. It is much wiser, therefore, to regard every hematemesis as serious and to act promptly in caring for it.

The suspicion that hematemesis is due to ulcer is confirmed by (1) a previous history of indigestion, with the characteristic features of chronicity, periodicity, rhythmicity and the nature of the symptoms, but there may be no such history preceding and bleeding may be the first sign of the disease.. (2) Observation of the amount and character of the blood vomited; this may be variable in quantity, simply brown shreds in the vomitus, or dark brown discolouration of the fluid contents of the stomach, or a small amount of bright red blood, or an amount so large it may prove fatal. The common course is for small repeated haemorrhages to occur at short intervals before there is a large one.

At the time of the hematemesis, history only is available for diagnosis, with observation of the patient and of the material vomited. It is wiser to treat the hematemesis and wait before making further investigation. Such delay should be for at least one week after the last haemorrhage. Then it is proper to employ as further methods of diagnosis (3) physical examination, which, if ulcer is the cause, shows no tumour mass and no alteration in the size of the liver or spleen and is otherwise negative except for epigastric tenderness; (4) gastric analysis, which tells much about gastric secretion and the differentiation between ulcer and cancer; and (5) gastro-intestinal X-ray examination. But it must be remembered that soon after a large haemorrhage there may be a low acidity because of secondary anaemia, and the X-ray report may be negative because the ulcer base is concealed by a blood clot.

II. Cancer of the stomach rarely causes profuse bleeding; usually there is slight oozing mixed with gastric secretion that results in dark brown or blackish shreds known as "coffee-ground" vomitus. But on the other hand, the hematemesis produced by cancer may exceptionally be copious and even fatal. Multiple hematemesis, due to repeated small haemorrhages, is the rule. In all other forms, one large haemorrhage is usually followed by a free interval for months or years; but in cancer the hematemesis is more or less continuous.

The suspicion that the cause of the bleeding in cancer is confirmed by a preceding history of indigestion and pain, with loss of appetite and weight and color, vomiting of food, increasing pallor and cachexia, usually extending over a period of months, but not over years as in ulcer. It is undoubtedly true, however, that cancer may be latent until bleeding occurs and hematemesis may afford the first sign. Physical examination usually but not always reveals a palpable tumour. Gastric analysis and X-ray films made after a little delay as in ulcer, usually reveal characteristic and diagnostic evidence of the true pathology present.

III. Portal Cirrhosis of the Liver. The hematemesis due to this cause usually comes with little or no warning of any previous disease of consequence. There is one large single hematemesis, seldom repeated soon. If the bleeding is often repeated it is not due to cirrhosis. The quantity is usually large and may be very large. The blood most

often is poured out from ruptured oesophageal varices, and therefore darker and more clotted than blood from an ulcer. Collapse is not so frequent or so marked, and alarming symptoms are more rare when hematemesis is due to ulcer. But here again, rarely, the first haemorrhage may prove immediately fatal. While the source of the blood, as already stated, is usually from ruptured veins in the lower oesophagus, in 80 per cent. of the cases shown at autopsy, it may be from gastritis and small superficial abrasions of the gastric mucous membrane.

The suspicion thus created that the hematemesis is due to cirrhosis, is confirmed by (a) a history of previous indigestion, with repeated gastric upsets, abdominal discomfort, morning nausea and vomiting, poor appetite, but no pain such as that of ulcer or cancer. Previous painful dyspepsia is against the hematemesis meaning cirrhosis. (b) Physical examination may be practically negative, or frequently changes are found in the size of the liver and spleen. However, even though liver and spleen are both enlarged before a haemorrhage, they may be practically normal in size after it. There is no palpable tumour found as in cancer and no localized sharp tenderness as in ulcer; and if there is tenderness at all, it is diffuse and dull over the gastric area. Hematemesis is a comparatively early event in cirrhosis, but the most important early warning that some serious disease exists. Hence there is no such characteristic picture to be expected on physical examination, as is shown later on when ascites has occurred. (c) Laboratory examinations: gastric analysis shows the typical picture of a chronic gastritis, with abundant mucous, absent or greatly decreased secretion of acid and poor trituration of food; the blood gives evidence of a secondary anaemia and may show a positive Wassermann reaction if the cirrhosis has a luetic origin; liver function tests are not ordinarily of much value in the early stage at which hematemesis occurs. (d) Gastro-intestinal X-ray examination eliminates pathology in the stomach and duodenum such as might account for the hematemesis.

IV. Splenic Anaemia, also known as Banti's Disease, occurs most often in younger patients, 20 to 40. The characteristic picture presented is one of periodic large haemorrhages from stomach and bowels for years, with good health between them, provided they are far enough apart to allow blood reconstruction. This may go on for ten or more years, with no gastric symptoms whatever between the attacks of hematemesis. The characteristic features of this disease are therefore; (1) a history of repeated hematemesis; (2) good health between attacks; (3) a greatly enlarged spleen and moderately enlarged liver, with the spleen much larger than in ordinary cirrhosis; (4) a marked secondary anaemia, with leucopenia.

Other causes of hematemesis are remote and rare as compared with the four just reviewed. These other possibilities that must be kept in mind are persistent vomiting and retching from any cause; gastric crises; swallowed blood; acute gastritis; syphilis of the stomach; aneurism of the aorta that is leaking into the oesophagus; uraemia; leukaemia; purpura haemorrhagica; the so-called gastro-staxis described by Hale White, due to oozing from the gastric mucous membrane; and the bleeding described by Dieulafoy, from numerous broad, shallow erosions in the mucous membrane of the stomach.

Treatment of Hematemesis

At the time this emergency arises it should be treated regardless of cause, leaving the investigation of the meaning until a later occasion. The physician should have in advance a definite plan to follow so that he will not lose his equanimity and share in the general perturbation that a large hematemesis usually causes not only to the patient but to his family and friends.

The following rules for guidance, based on experience, may be accepted as trustworthy: (1) Place the patient in a hospital, if possible, for further observation and investigation, as well as for the better treatment of his condition. Whether there or at home, a nurse to carry out instructions faithfully is essential. (2) Absolute rest in bed should be enforced, with no unnecessary change of position, no rising from the supine posture, no visitors to the bedside. (3) Morphine hypodermically, to ensure mental and bodily quiet, should be given at once and every four hours thereafter if necessary. (4) Nothing whatever should be given by mouth, no food, no water, no drugs. (5) Ice should be kept continually applied to the abdomen by the ice-coil or the ice-bag. (6) Avoid immediate saline infusion, or intra-venous glucose solution or even transfusion; for the cessation of bleeding depends on collapse of the vessel wall and clot formation. (7) No stimulants are indicated, such as strychnine, camphor, caffeine or digitalis, even though the pulse is weak and rapid; for weakness offers the best defense against continuance or resumption of the haemorrhage. (8) After twelve hours, ice water may be given by mouth first, a half ounce every hour, but even this stimulates peristalsis. The amount can be gradually increased after twenty-four hours, if there is no further haemorrhage. (9) Rectal feeding is not indicated, because food by bowel stimulates reverse peristalsis. (10) If a second haemorrhage follows in a few hours after the first, judge of the seriousness of this both by the amount vomited or passed by bowel and by a blood test which will prove by the hemoglobin percentage and the red cell count how far these have fallen below normal. (11) It is always better to change too soon than too late from medical to surgical treatment, and while there can be no absolute rule about this, when the hemoglobin falls below 40 per cent. and the red count below two million, it is best not to delay further. Then the patient should be taken to the operating room, a blood transfusion given at once, the abdomen opened and the bleeding ulcer area excised or cauterized. (12) But if no further haemorrhage occurs after the first or second and the anaemia does not exceed the figures mentioned, after 48 hours the feeding of milk and cream mixture by the Sippy plan may begin, with the usual alkaline powders half way between feedings, gradually increasing the amount of food given. (13) If after feeding is resumed another haemorrhage occurs, resort to surgery is indicated, following a transfusion.

Such is the immediate emergency treatment for any large hematemesis no matter from what cause. After it has ceased and at least one week has elapsed, then investigate its meaning. But the most common cause is ulcer and when in doubt accept that diagnosis pending further diagnostic tests.

If the further evidence obtained by gastric analysis and by X-ray examination proves that the patient has cancer of the stomach, as the

cause of the hematemesis, this ought to be removed by the surgeon if it is considered operable. If it is inoperable, then daily lavage with hot bicarbonate of soda solution will frequently suffice, by keeping the ulcerated area clean, to stop the bleeding. If not, then some mild astringent may be used for lavage, such as silver nitrate solution, 1 to 2,000.

In cirrhosis of the liver, no method of treatment has yet been devised for getting at the lower end of the oesophagus satisfactorily and treating the dilated veins. The plan of suitable diet and depletion of the liver by saline cathartics helps to relieve the venous congestion in the entire gastro-intestinal tract as well as anything can.

The only treatment for splenic anaemia that offers any permanent relief is splenectomy; and for years after such operation patients whose course has been followed have remained free from hematemesis.

* * *

CANADIAN MEDICAL ASSOCIATION

Preparations for the meeting of the Canadian Medical Association, which will be held in Vancouver June 22nd to 26th, 1931, are proceeding actively. The Chairmen of the various committees responsible for the arrangements, together with their secretaries are meeting weekly under the Chairmanship of Dr. A. S. Monro. Designs for a special badge, which will feature the local colour of British Columbia, are being prepared. The Hotel Vancouver has been very generous in its offer of floor space for exhibits in the lobby and prospective exhibitors are being "lined up" by Dr. H. H. Milburn with a view to locating them to the best advantage. Beginning in January, 1931, special articles will appear monthly in the Canadian Medical Association Journal setting forth the attractions of the Pacific Coast country and its big advantages for such a gathering as is projected. Various transportation agencies, national, provincial and local, are preparing special itineraries and attractive side trips which visitors from the East may avail themselves of at small additional cost.

As has been said before, it behooves each member of the medical profession in British Columbia to make the success of this convention a personal matter, not only by resolving to attend and share in all the professional and social activities, but to urge upon all of his Eastern friends the fact that they cannot miss this convention without a very real loss to themselves.

* * *

WARNING

It may be well at this time to renew a warning to doctors against lending money to strangers. This is occasioned by the fact that at present a person who introduces himself as a doctor has been calling upon members of the profession, and on the strength of certain social affiliations, and his business prospects in Vancouver, has borrowed various sums of money. Up to the moment of writing none of these sums have been returned.

British Columbia Laboratory Bulletin

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All communications should be addressed to the Editor as above. Material for publication should reach the Editor not later than the seventh day of the month of publication.

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B. C. MILK-BORNE TYPHOID EPIDEMIC

By DR. F. D. SINCLAIR, M.H.O., Surrey, B. C.

It is not the purpose of this article to go into minute details of a typhoid outbreak, but rather to relate some of the problems whcih frequently confront a rural Medical Officer of Health and the relationship of those problems to adjoining urban centres and the public at large.

We must admit that the occurrence of typhoid fever in a district is a direct reflection on the efficiency of the sanitary personnel of the district concerned. However, on October 18th last, Dr. D. A. Clarke reported to me a case of typhoid fever in the South Westminster district of Surrey Municipality which he had seen and diagnosed in his private practice. Fortunately Dr. Clarke was Medical Officer of Health for the City of New Westminster, but his private practice extended into the adjoining Municipality of Surrey. He had two other suspicious cases under observation. These two cases were living in a house in Surrey from which milk was being distributed in raw state both locally and in New Westminster City. There had not been a case of typhoid reported in Surrey for more than a year. On the following day two other suspicious cases had developed. We began a joint investigation. It was found that all cases were getting their milk supply from a small dairy in South Westminster. There was no delivery route, but customers called to get their supply at the door. The proprietor of the dairy had died about three weeks before the onset of the first case from bronchopneumonia and myocardial degeneration. He had been ill for about five weeks, but had remained on his feet until the last few days. During his

illness he had continued to attend to his cattle and do the milking. He had had no medical attention until the last few days of life when pneumonia had developed; heart had played out. The history previous to this was that he had suffered from malaise headaches and gastro-intestinal disturbance. In view of the evidence it seemed conclusive that we had reached the source of the infection, and had to deal not with a carrier of typhoid, but with a case.

The water supply for the house and dairy was from two sources. One supply, a natural spring in the yard, about which a pit had been dug, showed gross pollution. The other supply, from a natural spring high up on the hillside but reasonably removed from direct drainage, on laboratory analyses was found contaminated.

A list of customers was obtained. Thirteen families in all were getting milk regularly from this dairy—eleven locally and two families in New Westminster City. All families were visited and warned of exposure and advised to have anti-typhoid vaccine administered without delay. Vaccine was supplied immediately by the Provincial Department of Public Health, and any necessary laboratory work done by the Provincial Government Laboratories, Vancouver. In all some fifty inoculations were given. We have not heard of any reactions from the vaccine other than a very transitory malaise. In all fourteen cases developed in the area, all traceable to the milk supply; no cases have occurred in persons having inoculation, and no cases have developed since November 1.

A further angle to this case of interest to the adjoining urban centres is the disposal of effluent from the infected premises. The septic tank drained into bottom land subject to a high water level in wet weather and thus passing into a road ditch. It was found in tracing this out that water cress grows profusely in the ditch and that market gardeners had been taking cress away in quantities for consumption in the adjoining cities. Fortunately as far as could be learned no cress had been gathered since the outbreak. We were fortunate in this case in having to deal with a milk borne infection, the source of which was so readily apparent and the distribution so limited.

One is struck by the necessity of all persons having to do with the handling of milk reporting illness; of the desirability of early notification and co-operation between adjoining health bodies, and of the early use of laboratory facilities in all doubtful illness in purveyors of food supplies; and again impressed with the inability of part time rural medical offiicers of health without the advantage of trained saintary personnel to adequately cope with infections of this nature.

CHANGES IN LABORATORY SERVICE

By H. W. Hill, M.D., Director, V.G.H. Laboratories
Vancouver, B. C.

Beginning October 6th, 1930, these Laboratories, hitherto open until 11 p.m. each night, close at 6 p.m.

Thereafter, to 8 a.m. next morning, only certain emergency examinations, emergency urinalysis, white cell counts, red cell counts, spinal

fluid, Vincent's and Gonococcus examinations are made; and these are made by Internes, refreshed as to technique by special instruction given during the day by the Laboratories.

Regular laboratory workers are *on call,* however, from 6 p.m. to 8 a.m., to deal with the more intricate biochemical reactions which may be needed (Blood sugar, N.P.N., blood groupings, blood cultures, etc.)

Reports on all specimens examined during the evening period by the Internes or by the regular *staff on call* are filed next morning in the Laboratory and become part of the regular records. Reports to physicians on these are of course made by the Interne or call-staff as soon as the examination is complete.

The closing of the Laboratories at 6 p.m. means that reports on specimens examined during the day *up to 6 p.m.* cannot be obtained *after 6 p.m.* by phone to the Laboratories as heretofore.

Physicians desirous of phone reports on specimens examined late in the afternoon, should phone the Laboratories *before 6 p.m.* Such reports as are then ready can thus be obtained by phone, and are mailed in any case.

Such reports as are *not* ready by 6 p.m. cannot of course be ready until next morning, so that phoning after 6 p.m. can not obtain any information that is not available before 6 p.m.

These changes we believe will not prove disadvantageous to the physicians or the Laboratory work, although they may require some minor readjustments.

They have not been adopted by choice but from pressure of necessity. They constitute a method of meeting the laboratory shortage in *space,* which shortage in turn means shortage in *staff;* both of which shortage are due to a shortage of *funds.*

Even had we sufficient available funds at this moment for ideal readjustment of the laboratory services on a plane and scale suitable to the largest hospital in Canada, months would necessarily elapse before such ideal changes could be implemented, since increased space would be the first material addition essential to all others.

Patience and co-operation are asked of the profession, especially during these inevitable "hard times."

It must be remembered that the above change in closing hours will not materially reduce the number of specimens to be handled by the regular laboratory staff.

What it accomplishes is this—that the staff is relieved of covering, every night, the period from 6 p.m. to 12 p.m., thus releasing one technician and one clerk for the peak load hours of the morning and the afternoon.

We have lost (by marriage) two technicians. The readjustment now in effect, practically restores to us one technician. We have lost also our Administrative Medical Assistant, whose services have been invaluable; we are attempting to carry on without replacing him.

But both Public Health work and Hospital work continue to increase except in the item of urines (routine and diabetic).

Thus the nine months of 1930 (January to September, inclusive) compare with the same nine months of 1929, thus:

	Jan.—Sept., 1930		Jan.—Sept., 1929	
Routine urines	23,689		20,373	
Diabetic urines	2,644	39,432	1,847	35,916
All other Hospital exams.	13,099		13,696	
Public Health examinations	39,099		46,228	
Total	79,064		82,144	

We have (in round numbers), as thus shown, a 4% increase in *total* work; a 16% increase in Public Health work; a 4% increase in Hospital work, *other than routine and diabetic urines;* together with a 16% decrease in those urines themselves.

We congratulate the Hospital, the physicians, and ourselves, on the reduction in routine urines; and also on the increase shown in the other, more valuable, items. But, unless provision for increased space, staff and funds be made, the increases in certain items must cease, or be balanced by decreases in other items; otherwise the unfortunate necessity, already realized in part, of refusing certain work, will inevitably materialize further.

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GENERAL MEETINGS will be held on the first Tuesday and CLINICAL MEETINGS on the third Tuesday of the month at 8 p.m. Place of meeting will appear on the Agenda.

December 2nd—General Meeting:
Speakers—Dr. E. H. Saunders; "Early Recognition of Acute Mastoiditis"
Dr. N. E. MacDougall; "The Common Cold"

December 16th—Clinical Meeting.

January 6th—General Meeting:
Speaker—Mr. Justice Morrison; Certain Contacts of Medicine and the Law."

January 20th—Clinical Meeting.

February 3rd—General Meeting:
Speakers—Dr. F. N. Robertson; "Some Unusual Uses of Common Drugs."
Dr. Wallace Wilson; "Stenosis of the Mitral Valve."

February 17th—Clinical Meeting.

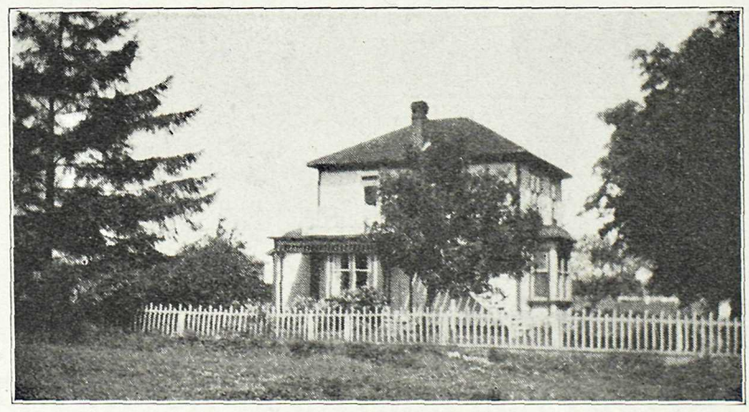
March 3rd—General Meeting:
THE OSLER LECTURE—
Dr. R. E. McKechnie; "Reminiscences of Forty Years' Practice."

March 17th—Clinical Meeting.

April 7th—General Meeting:
Speaker—Dr. C. F. Covernton; "Problems of the Primipara."

April 21st—Clinical Meeting.

April 28th—Annual Meeting.



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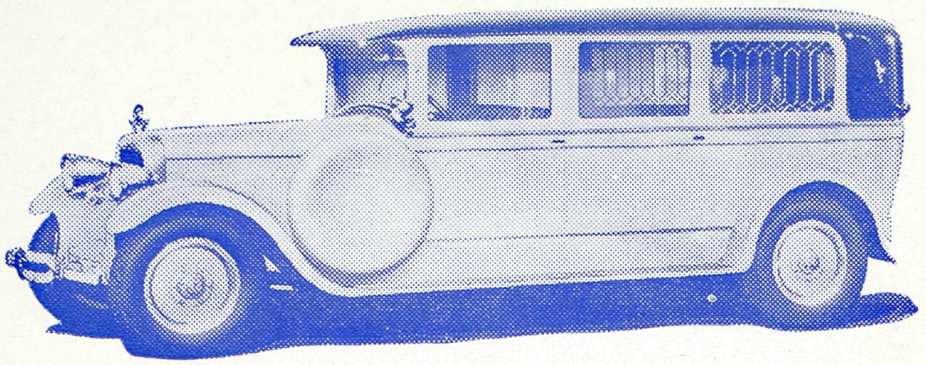

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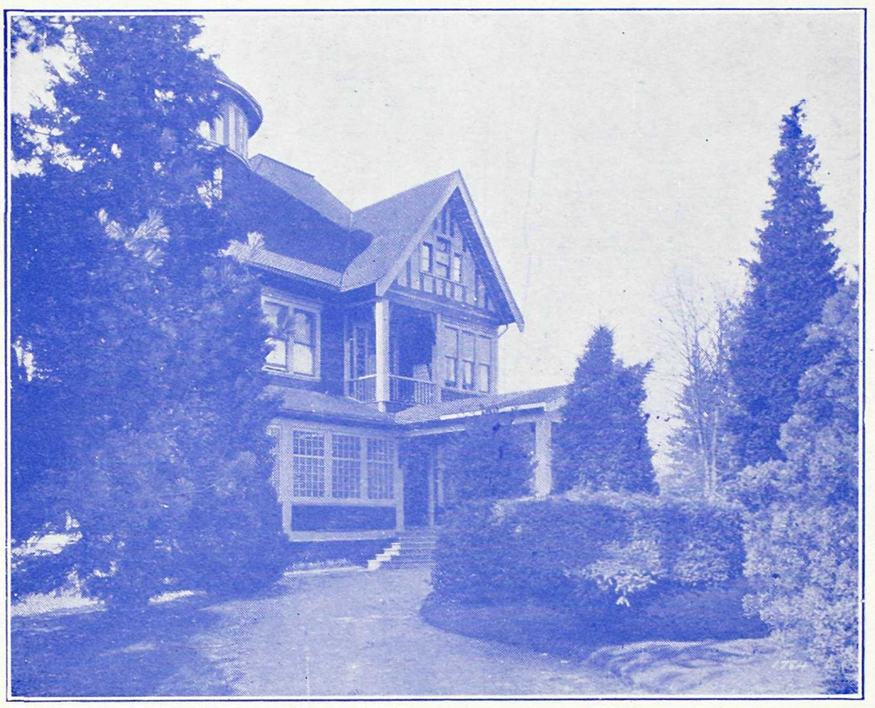

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