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In This Issue:

Page

A REVIEW OF PRIMARY ATYPICAL PNEUMONIA
Col. A. B. Walter, R.C.A.M.C. 297

THE DIAGNOSIS AND TREATMENT OF CHRONIC PROSTATITIS ASSOCIATED WITH NON-SPECIFIC URETHRITIS
Flt.-Lt. H. G. Cooper, R.C.A.F., and
Surg. Lt.-Cmdr. John T. MacLean, R.C.N.V.R. 304

NEWS AND NOTES 311

ANNUAL DINNER
FRIDAY, NOVEMBER 30th, at 7:00 P.M.
BANQUET ROOM—HOTEL VANCOUVER

VOL. XXI. No. 12 — SEPTEMBER, 1945

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THE VANCOUVER MEDICAL ASSOCIATION

BULLETIN

Published Monthly under the Auspices of the Vancouver Medical Association in the interests of the Medical Profession.

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Vol. XXI. SEPTEMBER, 1945 No. 12

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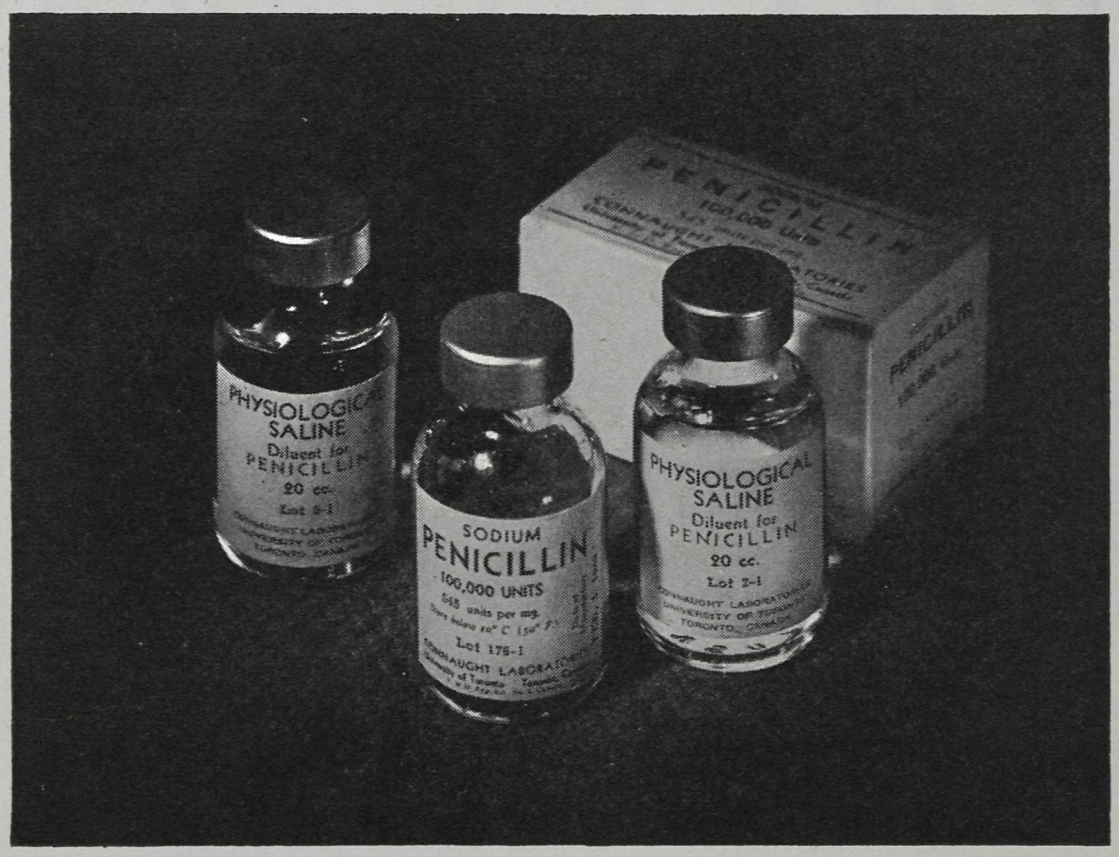

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VANCOUVER HEALTH DEPARTMENT

STATISTICS—JULY, 1945

Total population—estimated	311,799
Japanese Population—Estimated	**Evacuated**
Chinese population—estimated	6,395
Hindu population—estimated	335

	Number	Rate per 1,000 Population
Total deaths	303	11.4
Chinese deaths	22	40.5
Deaths—residents only	259	9.8
BIRTH REGISTRATIONS:		
Male, 310; Female, 314	624	23.6

INFANT MORTALITY:	July, 1945	July, 1944
Deaths under one year of age	13	14
Death rate—per 1,000 births	20.8	22.4
Stillbirths (not included above)	10	9

CASES OF COMMUNICABLE DISEASES REPORTED IN THE CITY

	June, 1945		July, 1945		Aug. 1-15, 1945	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Scarlet Fever	20	0	12	--	3	--
Diphtheria	1	0	--	--	--	--
Diphtheria Carrier	0	0	--	--	--	--
Chicken Pox	97	0	31	--	4	--
Measles	243	0	24	--	1	--
Rubella	47	0	3	--	--	--
Mumps	14	0	5	--	1	--
Whooping Cough	3	1	--	--	--	--
Typhoid Fever	0	0	--	--	--	--
Undulant Fever	0	0	--	--	1	--
Poliomyelitis	1	0	2	--	--	--
Tuberculosis	60	17	32	16	--	--
Erysipelas	4	0	1	--	--	--
Meningococcus Meningitis	1	1	2	1	--	--
Paratyphoid Fever	1	0	--	--	--	--
Infectious Jaundice	0	0	--	--	--	--
Salmonellosis	1	1	8	1	5	1
Salmonellosis (Carrier)	0	0	--	--	1	--
Dysentery	0	0	1	--	1	--
Syphilis	80	0	108	3	--	--
Gonorrhoea	179	0	189	--	--	--

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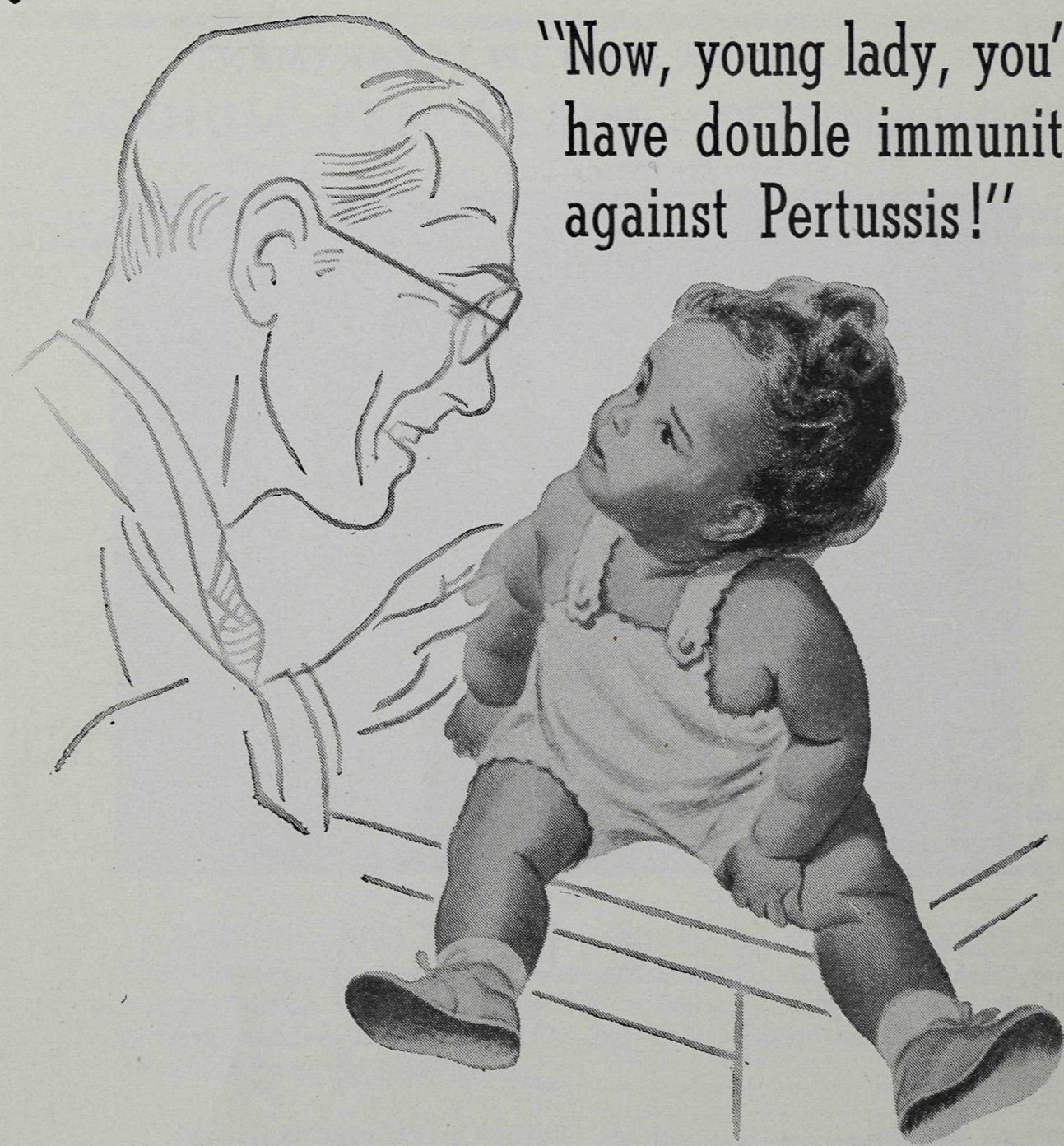

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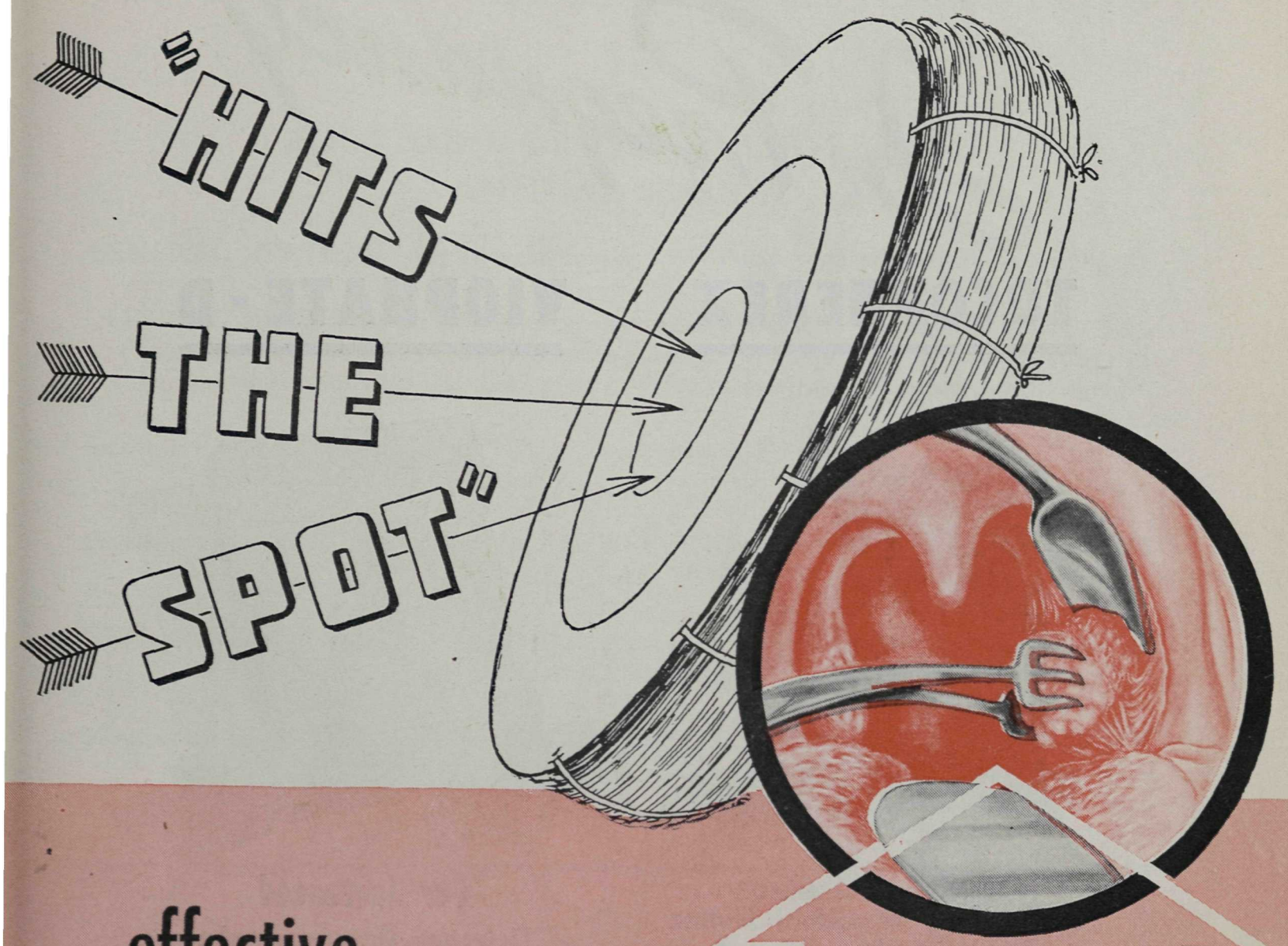

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GENERAL MEETINGS will be held on the first Tuesday of the month at 8:00 p.m.

CLINICAL MEETINGS will be held on the third Tuesday of the month at 8:00 p.m. These meetings will continue to be amalgamated with the clinical staff meetings of the various hospitals for the coming year. Place of meeting will appear on the agenda.

October 2—GENERAL MEETING. Psychopathic Personality. Major C. H. Gundry.

October 16—COMBINED CLINICAL MEETING AND STAFF MEETING AT VANCOUVER GENERAL HOSPITAL.

November 6—GENERAL MEETING. Protruded Intervertebral Discs—Analysis of Sixty Cases. Major P. O. Lehmann, R.C.A.M.C.

November 20—COMBINED CLINICAL MEETING AND STAFF MEETING AT ST. PAUL'S HOSPITAL.

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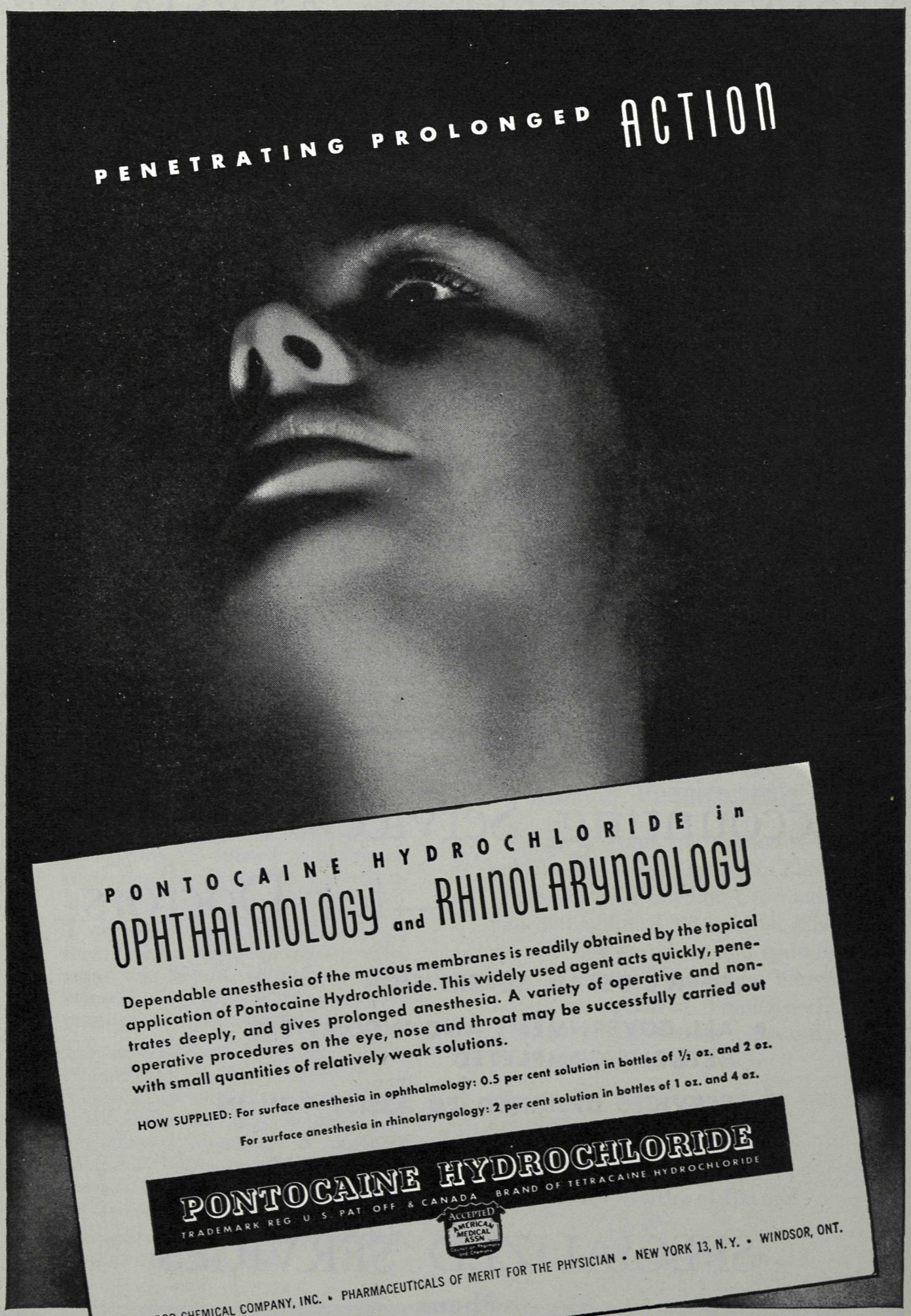

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The Editor's Page . . .

It is with great pleasure that we have received from Dr. Geo. Kill, our Archivist and Historian, a first instalment of the History of the Vancouver Medical Association, now nearly sixty years old, and getting stronger with every passing year. We intend to publish this as we get it—and are going to make an effort to get it in loose-leaf form for binding later. A suggestion has been made that we should secure a large number of reprints for the keeping by the Association, to be bound later and issued in book form at a price which will make it easy for everyone to own a copy, as everyone will certainly want to do.

* * * *

Another excellent suggestion that has been made, which can be made into a reality forthwith, is that all newcomers to the profession here and elsewhere be asked to furnish the BULLETIN their name, qualifications, interne, postgraduate or other experience, and a small photograph, passport size. It is hoped to make arrangements with a photographer of standing whereby these can be obtained at a minimum price, and of maximum quality. A column in the Bulletin would be devoted to the purpose of publishing these each month. This would serve as an introduction of new members to the older brethren of the craft. In the olden days, when the youthful Thomas Doe, M.D., came to the city, and hung out his shingle, he was supposed to go and call on his older, established confrères, and introduce himself. It was sometimes a rather grisly business, as some of us could testify. Some of the older, more disillusioned men would gaze at one with a fishy, deflating sort of eye—would opine that it was rather a bad time to start practice in the city—times were bad, money was scarce and hard to collect, and so on: and one's morale rather tottered. It was not, of course, all like that. Some of the younger and brighter spirits would ask one in for a drink, tell a few good stories, and buck one up quite a bit—so that it came out about even. But perhaps this is a good way too. This need not, of course, be limited to Vancouver, or Victoria; we shall be glad to hear from any part of the Province. So please, all men who have been here two years or less, send in your dossier, and we will start work on it as soon as possible.

* * * *

We gladly publish a request by the Rehabilitation Committee of the College of Physicians and Surgeons of British Columbia, to all doctors in Vancouver and Victoria to do the very best they can to help doctors returning from the Armed Services to re-establish themselves in offices, by sharing offices, doubling up, allowing use of offices and equipment for even two or three days a week.

One of the worst features of this early phase of the post-war period is the appalling shortage of room. For six years all available office space has been used by the various Services, and they cannot evacuate as quickly as we should like. No doubt their departure or concentration in other centres will ease the shortage considerably when it comes. Then there has been no new building of office buildings for a long time—naturally enough—and there is not likely to be for a considerable time longer. The city has grown greatly, and office space has filled up rapidly. So we cannot be surprised at the shortage. All we can do is do our best to share what we have. These men coming back have lost enough in all conscience in practice and connections—have given more than any of us who remained—and we cannot lightly look on while they struggle for a new foothold. Will all those who have any room available, or any suggestions to make, get in touch at once with Dr. L. H. Leeson, Chairman of the Committee, at 203 Medical-Dental Bldg., Vancouver. It is suggested, too, that doctors in the Services who have information in advance of the date of their discharge, and wish to get office space, get in touch with this Committee, at the same address.

Lastly, the Annual Dinner of the Vancouver Medical Association. Now that the war is (technically) over, we rejoice to see that this Function of Functions is to be resumed. It will be held on November 30, 1945, at the Vancouver Hotel, and the keynote of this dinner is a heartfelt welcome to all returning members from the Active Services. It is also a welcome to new members. It will be run as of old, strictly by members for members, and no outside talent will be employed. Advance notices look good. Formal notices will be posted, but keep the date open, November the 30th, and plug the telephone for that evening. Let us all turn out and welcome back our old friends and extend a welcome to our new ones.

LIBRARY NOTES

RECENT ACCESSIONS TO LIBRARY—

Recent Advances in Medicine, 11th ed., 1944, by G. E. Beaumont and E. C. Dodds.

New and Non-official Remedies, 1945, American Medical Association Council on Pharmacy and Chemistry.

The Medical Annual, 1945, Sir Henry Tidy, Editor.

Surgical Clinics of North America, Symposium on Anæsthesia, August, 1945, Mayo Clinic Number.

Index of Differential Diagnosis of Main Symptoms, 6th ed., 1945, Herbert French, Editor.

Savill's System of Clinical Medicine, 12th ed., 1945, E. C. Warner, Editor.

Treatment in General Practice, 5th ed., 1945, by Harry Beckman.

BOOK REVIEW

MANAGING YOUR MIND: Kraines & Thetford. (Macmillan.)

One thesis of this book is that man is a total organism, his physical and his psychological conditions being not separate entities but different aspects of one totality. The major premise of the authors is to demonstrate the validity of their statement: "Our emotional states as definitely determine the well-being of our bodies as they reflect it."

In an interesting style the authors have presented a plan of action whereby one may understand the relationship between good health and well integrated emotional states. Tension states are simply defined and the various psychosomatic symptoms are dealt with in as plain terms as possible.

Some constructive plans are presented and their application to specific problems are discussed.

Members of the profession, nurses and social workers should profit from careful reading of this book and it is safe reading for certain carefully selected patients.

J. T. C.

SPECIAL NOTICE!

All doctors in Vancouver and Victoria who are willing to help out in the present office shortage emergency by sharing their offices at specified hours with doctors returning to private practice from the Services are requested to submit their names immediately to the Chairman of the Rehabilitation Committee, Dr. L. H. Leeson, or to the executive office of the College of Physicians and Surgeons, 203 Medical-Dental Building, Vancouver.

Medical officers in the Services who may have advance information as to the date of their discharge and who may wish to take advantage of the above plan are requested likewise to get in touch with Doctor Leeson or the College Office.

British Columbia Medical Association

(Canadian Medical Association, British Columbia Division)

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Immediate Past President	Dr. G. O. Matthews, Vancouver

At the Annual Meeting of the British Columbia Medical Association, September 13th, 1945, the above mentioned officers were elected for the ensuing year.

In addition, five directors-at-large were elected: Dr. H. H. Milburn, Vancouver; Dr. P. A. C. Cousland, Victoria; Dr. L. A. C. Panton, Kelowna; Dr. C. H. Hankinson, Prince Rupert, and Dr. F. M. Auld, Nelson.

* * * *

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* * * *

GOLF

The final Golf Tournament for the year 1945 was held on Marine Drive Golf Course on October 4th, 1945, with forty-two golfers competing. The winners were awarded with appropriate prizes at the dinner which was held following the tournament. The Joe Bilodeau Trophy was won by Dr. E. E. Day while the Worthington Cup was won by Dr. Gerald Burke. Dr. George Langley won the Ram's Horn Trophy. Dr. T. A. Johnston was winner of the Macdonald Trophy and the silver cigarette case donated with the Trophy. Dr. George Seldon and Dr. F. Day-Smith were the winners of the second low gross and second low net for the day, respectively. These prizes were sports shirts donated by Straith and Charlton & Morgan.

Dr. J. R. Davies won the hidden hole competition, while Dr. J. W. Millar was again the winner of the long drive and Dr. Boyd Story was closest to the pin. The highest score turned in went to Dr. J. Stewart.

Following the presentation of prizes the officers for the coming year were elected: Dr. Harold Caple as Captain, Dr. W. W. Simpson as Vice-Captain and Dr. J. C. Thomas as Secretary.

The Committee in charge of Golf at the Annual Meeting wishes to thank the following donors of prizes:

Mead Johnson & Company of Canada, who originally donated the Trophy Cup, which is competed for annually, and who also provide a prize for the member who holds the sup each year.

Ayerst, McKenna & Harrison Ltd.—a fountain pen.
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Abbott Laboratories, Ltd.—Bill fold.
Ciba Company Limited—Box of cigars.
B. C. Stevens Company—a stethoscope.
Davis & Geck Inc.—$500 War Saving Stamps.
Eli Lilly & Company Ltd.—Caudal set.
Friendly Firm—jigger.
George Straith Limited—$10.00 scrip.
Henry Birks Limited—a pipe.

The Association is very appreciative of the support given in its Annual Meetings by the above firms, who contributed golf prizes, and who participate as exhibitors and panel-greeters from year to year.

* * * *

We would like to thank the heads of the three Medical Services for providing speakers from the Navy, Army and Air Force at our Annual Meeting. These Medical Officers contributed greatly to the programme.

* * * *

We wish also to express our appreciation to the Canadian Medical Association for its splendid support of our meeting. The participation by the C.M.A. party was appreciated by everyone.

NOTICE

We hope that men who are demobilized from the Forces will notify the office of the Registrar of their addresses. This is important, as we wish to get in touch with each and every one of the men who are returning.

A. J. MacLACHLAN,
Registrar.

A REVIEW OF PRIMARY ATYPICAL PNEUMONIA

COL. A. B. WALTER, R.C.A.M.C

Read at the Annual Meeting of the British Columbia Medical Association, September, 1945.

In August, 1935, Bowen, writing in the *American Journal of Roentgenology*, described as a new disease entity an "acute influenza pneumonitis" occurring among soldiers in Hawaii.

In the following year Allen[1] wrote of this disease as an "acute interstitial pneumonitis"; in 1937 Scadding[2] described in the *British Medical Journal* a series of cases as "disseminated focal pneumonia."

Other reports of occasional examples appeared at intervals, but there was no indication that incidence was increasing enough to attain to more than a medical novelty.

In Canada, little special interest in the "new disease" was aroused until after the outbreak of war, when radiologists again led the way; in the autumn of 1939, as soon as enlistment radiograms were made routine, they began reporting unusual and unexpected lung densities among recruits for the Services. In many cases histories were elicited of recent respiratory illnesses, often considered by the men to have been trivial "colds." Deferment for a few weeks led as a rule to the return of a radiographically clear chest; physical signs had not been present at any examination. The singularity of the condition began to be suspected.

Large training camps arose across the Dominion, and with the concentration in each of thousands of men living in close association there were inevitable epidemics, among which diseases of the respiratory system took by a large margin the predominant place.

These camps were equipped with hospitals; in the larger ones there were good facilities for not only care of patients but also some analytical study of diseases. Unfortunately the exigencies of war did not often permit staff and sub-staff of wards and laboratories to keep in line with equipment, and this put limitations on investigative and statistical work that are a matter for disappointment.

At first, with comparatively few cases identified, there was skepticism about the individuality of this primary atypical pneumonia. We recollected how meagre had been our previous advantage of chest radiograms in minor respiratory illnesses; it became obvious that the diagnosis of this novel interest depended largely on X-ray findings; was it possible that we were merely becoming cognizant of something that had been always with us?

Later, however, with ever-increasing numbers of cases there grew on those who attended these patients the strong impression that this was something beyond chance of having been merely missed before.

Scattered cases were seen the year around; each October or early November a wave of respiratory infections would arise in the camp, and the epidemic would continue, with perhaps a remission or two, until the following May or early June.

There was a heavy contamination of the troops by hæmolytic streptococci; a large percentage of normal men were found to carry the organisms in their throats. Infections from these causing febrile illness, formed one large group of hospital admissions, but the largest group was of an illness resembling influenza; an abrupt onset with fever, chills or chilliness, general malaise, generalized aches and headache, often mildly sore throat and hacking cough. Constitutional symptoms outweighed local respiratory symptoms. In a minority of cases there had been a prodromal few days of mild malaise and symptoms of "common cold" but with or without this the striking event of onset was the abrupt phase.

A system of admission was used whereby segregation of streptococcal infection was attempted; a few mistakes made in ward assignment by admitting officers would show that the clinical pictures of streptococcal and influenza-like infections were generally distinct.

This influenza-like illness could not with hospital facilities be proved influenza, and for working purposes was given the diagnosis of "clinical influenza."

Hare, Hamilton and Feasby in their "Investigation of Influenza and Similar Respiratory Infections in Canada"[7] found that such cases fell under the identity of influenzas A, B, and an unknown agent, that the percentage of pulmonary involvement was nil in A type, and less in B than in the type of unknown agent, that types could not be differentiated by clinical appearance or course, though each had minor trends as to symptoms and duration.

It was among the "clinical influenza" group that primary atypical pneumonia was found. As between influenzas, so between clinical influenza and atypical pneumonia no certain prodromal nor clinical distinction existed. Mild cases proved to have X-ray pulmonary densities, severe cases might be free from them. Where present, there arose the question of whether, in spite of non-significant sputum cultures, they represented secondary infection as broncho-pneumonia and were reminiscent of the influenzal pneumonia of 1918.

A period of nine months in one hospital during which every patient with acute respiratory infection received a chest radiogram upon admission and before assignment to a ward, brought out an illuminating find; although these X-rays were usually taken within twenty-four or at least forty-eight hours of the acute onset of illness, the parenchymal densities were already present in the vast majority of cases of atypical pneumonia; a small minority developed them during the first four days in hospital. This early presence certainly weighed against the conception of secondary involvement of the lung.

The onset seemed identical with that of clinical influenza. Of Dingle's[5] series of primary atypical pneumonias, 31% had histories suggesting acute upper respiratory infection immediately preceding the major phase, and he remarked on the comparison of a similar prodrome in 64% of pneumococcal pneumonias. Van Ravenswaay[12] noted an abrupt onset in 33% of his cases. He also estimated the incubation period to be from 2 to 21 days, usually less than 15.

The course might remain identical with that of clinical influenza or might be much more protracted. In some cases arising among hospital personnel and observed very early the temperature ran a low-grade course for a few days, rising abruptly to 102-105°, continuing with medium remissions for three to five days and dropping by rapid lysis to near normal, then tapering off to normal; this was the average routine of the uncomplicated. Karpel, Waggoner and McCown[8] found that of their series (500), 10% had no fever, in 55.8% the duration of fever was four days or less and in 28.2% it was 9 days or less.

In many instances the patient is not very toxic, and rarely is he toxic enough to cause real concern. A non-productive cough is the rule, but in some the cough is almost absent. After several days there begins to appear a little sputum, in some cases blood-streaked; in uncomplicated cases it remains scanty. Substernal or parasternal distress is present in a fair number of patients, related probably to tracheitis and cough-effort respectively. Lateral thoracic or lateral abdominal pain with splinting, present less often, usually is explained later by signs of parietal or diaphragmatic pleural involvement.

During part of one season cyanosis was noted, enough to be noticeable in lips and fingernails. The chief point of interest here is that it was present at the same period and as often in cases of clinical influenza.

With elevation of temperature there is no disproportionate tachypnœa nor tachycardia, no dyspnœa nor fanning of alae nasi except where pleural pain causes its characteristic breathing changes.

Physical chest signs are variable and unreliable. In the first two days many patients show none; within four days probably the majority have the one which appears most characteristic of the disease; that is, one or more patches of fine and medium crepitations quite contrastingly delimited. Often this sign is brought out by forced breathing or coughing when absent during normal respiratory excursion. Its commonest site is in the interscapular area between hilus and base, and its delimitation distinguishes it from basal crepitations of other origins. In severe and protracted cases piping rhonchi and

coarse bubbling rales may supervene, but the sounds of specific diagnostic value are the first mentioned. Even they may never be present. In a fair percentage of cases, predominantly unilateral, there is deficient expansion of that side of the chest. Changes in percussion note are doubtful, broncho-vesicular breathing away from the hilar area is rarely definite. In a few severe cases, however, in which the diagnosis withstands reconsideration, there is frank local blowing breathing and dullness. This is not what one would expect; the degree of underlying induration does not seem to warrant it.

X-ray findings exposed the disease, and X-ray findings still are the deciding factor in diagnosis. If one were to carefully examine the chest of every patient with clinical influenza every day for a week he would identify most cases of atypical pneumonia, but by no means all; the radiogram finds all except the occasional retro-cardiac lesion, and perhaps over-diagnosticates a little regarding linear peribronchial densities that are borderline in appearance and significance.

The characteristic radiogram shows soft woolly densities about one or both roots and along the bronchial tree; near the hilus they may be radiating, further out more globular. More often than not they are multiple and predominantly basal. Karpel[8] found lower lobes involved in 92.4% of cases, Meakins[10] in 94%. I believe that lesions are usually bilateral; the right base is credited with showing most of them, especially near the cardiophrenic angle, but later or left oblique radiograms show left retro-cardiac densities also. In upper lobe densities the distinction from tuberculosis on one film alone may not be possible. An occasional case shows widespread or even universal mottling of the lung areas. The shadows are not dense nor often wedge-shaped, they suggest infiltration rather than consolidation as that is measured by lobar pneumonia, and I feel that the word "consolidation" should not be associated with them. Their appearance is lobular, rarely lobar; the latter appearance and heavy density lead to review on the suspicion of bacterial pneumonia. The X-ray densities in most cases have cleared within two weeks; in complicated lesions they remain for months and have serious significance.

Laboratory data do not help in distinguishing primary atypical pneumonia from influenza; they do help, however, in distinguishing it from the bacterial pneumonias.

There are no specific urinary findings.

All writers agree that the white blood cell numbers are normal or only moderately increased. In Karpel's[8] series 56.6% had a W.B.C. count of between 5,000 and 10,000, 25% more had under 14,000. Sqd.-Com. Meakins[10], in his series of 100 cases, found 73% of W.B.C. counts under 10,000 and 99% under 15,000. Major E. B. Kay (U. S. Army)[9] states that white blood counts often showed a secondary rise to 12,000 or 18,000 in the second week; we did not note this in uncomplicated cases.

While occasional counts up to 30,000 are seen, certain it is that subsequent evidence in the form of sputum cultures, infected pleurisies and bacteræmias has pointed out the prudence of reviewing the diagnosis when the W.B.C. count is over 15,000; in one hospital we made this the arbitrary line above which sulphonamides should be administered in the absence of more positive indications.

The differential count is usually considered normal, but some writers comment on a raised mononuclear fraction; Drew *et al*[6] find it as high as 3%.

The blood sedimentation rate is raise, not above 50 mm. x 60 min. (Westergren) as a rule, and its course is extremely useful in gauging the progress of a patient; in the average case it falls promptly after fever is past, but in the presence of poor resolution or complications, actual or threatened, it may persist for months; a patient is worth watching while it remains elevated above 15 mm. even if confirmatory abnormalities are not found.

The presence of cold agglutinins in the blood-serum—said to be found in higher titres only in trypanosomiasis, the orchitis of mumps, and primary atypical pneumonia—has been described by several authors, some of whom consider it a valuable sign. On a trial of thirty-three cases our laboratory was able to show cold agglutinins in one only.

Blood cultures in relation to the disease are uniformly negative.

Throat cultures give varied growths of which hæmolytic streptococcus and strepto-

coccus viridans are the most common factors but which include staphylococci, a few pneumococci; no predominant organism. Attempt to identify the anærobic streptococcus MG has been outside our experience.

Sputum in many cases is too scanty for satisfactory collection; findings there are non-specific also. It has been suggested that more attention be paid to the cellular elements in sputum and that search be made for mononuclear blood cells.

The average case makes a quick recovery after his temperature falls, and after four afebrile days is eating well, feels like getting up and has almost lost signs of disease; subsequently he regains strength rapidly.

Complications are unusual; in Karpel's[8] series they amounted to less than 3%. During the illness, and comparably during clinical influenza, a few patients present symptoms of encephalitic and meningitic involvement of which drowsiness, marked headache and post-cervical or interscapular ache are the most conspicuous. Cerebrospinal fluid in the few of our cases on which lumbar puncture was done showed no abnormality except in some instances a cell count increased to 10 or less lymphocytes.

Otitis media has been described by others; we did not see it.

A few cases showed slight jaundice which was transitory. Four cases showed palpably enlarged spleens; in one this persisted, probably coincidentally.

Minor pleural effusion—sufficient to fill the thoracico-hepatic angle in the radiogram —was not unusual; large effusions were so rare as to arouse suspicion about etiology. Karpel[8] has reported an incidence of four cases among five hundred. Empyema was not seen by us in any case where the possibility of bacterial pneumonia was excluded.

The commonest and anticipated complication is delayed resolution, which gives trouble in something less than 5% of cases. The patient remains semi-invalid, may or may not have cough with muco-purulent sputum, there are diffuse signs of alveolar moisture, one or more X-ray densities persist and W.B.C. count and B.S. rate remain abnormal. The residual lesion in such cases is evidently atelectasis. Sometimes it is of extent large enough to affect diaphragmatic level and mediastinal alignment. In its earlier stages it is obvious as an X-ray density; later it is not, but can be shown as a line or wedge-shaped blank in the lipiodol bronchogram. An instructive series of such was shown in Chorley Park Military Hospital in early 1944. One such case of mine had the sign, without bronchiectasis, fifteen months after his initial atypical pneumonia; during the interim he had had four attacks of acute respiratory illness, each with its recrudescence of X-ray density in the same region.

Major E. B. Kay[9] describes this sequence of events: bronchial or bronchiolar obstruction, atelectasis, acute infection, chronic interstitial pneumonitis, bronchiectasis. Initial obstruction is probably a direct effect of the atypical pneumonia itself, subsequent infection is presumed to be secondary since exudate removed by bronchoscope has been rich in neutrophile cells as well as mononuclears, although poor and non-specific in bacterial content. Twenty cases were studied whose histories gave no indication of previous pnumonia nor symptoms of bronchiectasis but who developed such within at most two years, some within months, after authenticated primary atypical pneumonia. Three of the cases in the cylindrical degree of the disease proved "reversible." The study impresses one with the importance of delayed resolution.

The incidence of such a sequence is reported by Van Ravenswaay[12] as 2.2%, by Karpel[8] as 2%; it presumably arises from those cases whose resolution is delayed, and since these total three per cent or less of all patients, bronchiectasis incidence should remain below this figure.

There are two schools of thought on the management of cases of delayed resolution; one produces convincing figures in support of rest treatment, the other equally convincing figures in favor of graduated exercise. In our limited experience we favored the principle of hyperpnœa through exercise, and were under the impression that B.S. rates, W.B.C. counts and X-ray densities were all accelerated thereby in their return to normal; we did not, however, initiate exercise unless the B.S. rate was falling to some extent.

Major C. H. Jaimet, R.C.A.M.C., at No. 6 Canadian C.C.S., has recently reported

that in post-operative atelectasis he has found two simple measures very useful in clearing bronchial plugs. One is stimulation of cough reflex by deep inhalation of cigarette smoke, the other is the still more potent induction of bronchial relaxation by hypodermic injections of adrenalin 1:1000. m v-viii. One would suggest trial of the same measures in the recent atelectasis of primary atypical pneumonia.

Recurrences of the disease are rare; 14 cases out of 2000 in one series[3] had second attacks within fourteen months.

We were fortunate enough to have no deaths during the two and a half years personal experience of which I write, although a few patients were sick enough to cause anxiety. The mortality of the disease is low; about 0.2% is the figure given by Karpel[8]. The autopsy findings on his one fatal case are a typical report, and I quote from it.

"Gross Findings: The lungs were voluminous, crepitant and spotty. There were irregular nodules—these had a firm consistency but not that of consolidated lung. The cut surface of the left lung revealed dark red, hæmorrhagic areas, which had an increased density. There were also fleshy red areas of collapse mingled with yellow, feathery lung tissue. The pleura of the right lung was a mottled blue and gray. The dark blue collapsed areas were depressed and often surrounded by bullæ of sub-pleural emphysema—the lower trachea and the bronchi of both lungs were filled with thick, slimy secretions; the hilar lymph nodes were large and succulent.

"Bacteriological Findings: Direct smear and culture of bronchial secretion showed a few pneumococci present. Direct smears of various portions of the lung parenchyma proper showed no bacteria present and gave no growth. Culture of the heart blood gave no growth.

"Microscopic Findings: The interstitial tissue of the upper lobe of the right lung including the alveolar septa was thickened and infiltrated primarily with mononuclear cells. A rare, pyknotic polymorphonuclear cell was seen. There were numerous large phagocytes laden with blood pigment. No fibrin was seen. Some of the alveoli were empty and were the seat of a compensatory emphysema. An occasional large bronchus was partially filled with muco-purulent exudate. There was also an acute pleuritis with mononuclears predominating. The examination of other lung areas corresponded."

Other writers agree in stressing the monocytic preponderance, both in interstitium and in alveolar exudate, and the minority of neutrophiles. Major Kay[9] and others note that walls of bronchi showed ulceration with an inflammatory process of the mucosa, and lumens plugged with exudate composed chiefly of neutrophils; ulcerative bronchitis with hæmorrhagic interstitial broncho-pneumonia.

Treatment of the illness, it is agreed everywhere, is non-specific. It is quite definite that neither sulphonamides nor penicillin are of any help, and this supports assumption that the disease is of virus origin.

On the other hand, these drugs are of decisive help in bacterial pneumonias, and in spite of all evidence there are occasional cases in which the decision betwen primary atypical pnumonia and bacterial pneumonia is almost impossible at the stage when action counts. Although there is no justification for the routine use of sulphonamides, we concluded that it was prudent to use them, in absence of other differential evidence, where the W.B.C. count was above 15,000 or the X-ray shadow was of lobar form or of "consolidation" density; this was with the idea of meeting both pneumococcal and streptococcal possibilities.

Van Ravenswaay[12] advocates the use of sulphadiazine for patients whose temperature is above 102°, with the purpose of combatting secondary invaders, and employs ammonium chloride to render bronchial plugging less liable, he avoids the use of opium and morphine derivatives which lower the cough reflex, after finding that the use of Dover's powder in acute upper respiratory infections increased the incidence of pneumonias. He however does administer morphine or codein for severe cyclic cough, acute pain and gross hæmoptysis.

One's own impression is that the minority with severe cough are depressed thereby

and have enough excess cough reflex to benefit from the loss of some of it. This is an argument that has gone on for thirty years.

Difficulties in feeding are seldom encountered, and the only rule is to give the patient as much food as he can be persuaded to take, especially protein and carbohydrate. If dehydration occurs it is usually the fault of attendants.

Oxygen is occasionally indicated for dyspnœa and cyanosis.

We found no advantage in keeping the average patient in bed for more than four days after defervescence provided he felt like getting up, and in 1944 the policy was initiated, with benefit, of having "setting-up" exercises started as soon as temperature became normal. On the other hand, careful observation during convalescence was found necessary, especially as to radiographic progress and B.S. rate, and the patient's activity was determined by such measurable criteria until they reached normal limits. Of particular significance is the distinction between a raised sedimentation rate that is falling and one that is not. Even a subsiding rate merits watching while it is above 15 mm. x 60 minutes.

Through the several years of camp hospital service one watched a progressive increase in numbers of cases; it reached a peak in 1944, and since a marked decrease has occurred in 1945 it may be hoped that the disease is to be added to those which have come in mystery and gone in mystery, like the much more dreadful influenzal pneumonia of the past World War. In the largest Canadian training camp there were admitted to hospital, during the first six months of 1944, 1043 cases of acute respiratory illness, of which 296 were primary atypical pneumonia; in the equivalent period of 1945 the numbers were of 867 acute respiratory infections and only 144 atypical pneumonias. There were variations in virulence from time to time; the interlude of cyanotic cases has been mentioned before.

Identity of the disease has given rise to much controversy. In the earlier days some held the view that it was simply a non-specific broncho-pneumonia following chronic upper respiratory infection such as sinusitis, or a summation of repeated acute infections. Others compare it to the influenzal pneumonia of 1918-1919; by others again, and by more as experience has grown, it is considered something distinct. Although again associated with clinical influenza it differs greatly from the pneumonia of 1918-19 in stage of onset, in clinical picture, in mortality rate and in pathological findings; the characteristic exudate of influenzal pneumonia[2] consisted of œdema fluid, red blood cells, no fibrin, few leucocytes.

Prevalence alone makes it difficult to assume a non-specific broncho-pneumonia. It seems conceivable that conditions of civilian practice might have allowed the overlooking of a smattering of cases, but not of tens of thousands in our own and other countries.

If it were the culmination of chronic or repeated acute respiratory infection one would expect some indication in the patients' histories and further one would expect recurrences on a large scale, for upper respiratory infections are no novelty.

An attempt to collect figures of susceptibility to nose and chest "colds" and of previous attacks of pneumonia was unsatisfactory in point of numbers and is not quoted, but the figures did not indicate any greater incidence of these among atypical pneumonia patients than among streptococcal throat infections or among patients with non-infective, non-respiratory disorders; it was of interest to note that among 125 of the latter, 16.8% gave histories of previous pneumonias and 38.4% had had "colds" within a month of admission.

Prevalence, early onset, character of clinical course and signs, of degree of toxicity, of white blood-cell findings, and of autopsy findings all tend to dissociate the picture from one of secondary bacterial pneumonia; one might say that the radiographic picture affords the only resemblance.

A similar syndrome has been seen in a number of cases of muco-cutaneous fever, and in our rare cases of lymphocytic chorio-meningitis; it is associated with rickettsial and virus diseases reported from abroad such as psittacosis, ornithosis, American Q fever and Australian Q fever. In its characteristics it has more resemblance to these than to

bacterial pneumonias. If the disease with which it is a part could be identified beyond cavil, the name "primary atypical pneumonia" would probably be replaced by the name of that disease, as have the others mentioned of its class.

The work of Wier and Horsfall[13] in 1940 was decisive in giving primary atypical pneumonia an identity. After failing to inoculate the disease into various animals they decided to try the mongoose, as a relative of the ferret which Andrews, Smith and Laidlaw in 1933 had found susceptible to influenza virus. The experiment was successful; throat washings from four cases of primary atypical pneumonia, raw and filtered through Berkefeld V candle, were instilled intranasally and induced general pulmonary hyperæmia and areas of consolidation. In serial passages, 64% of 90 animals exhibited pulmonary lesions, 44% consolidations.

Post-mortem examination of lungs showed extensive œdema and thickening of alveolar walls, and sparse cellular exudate composed almost entirely on mononuclear cells.

Attempted inoculation of mongooses with PR 8 strain of A influenza was not successful.

In 1944 the Commission on Acute Respiratory Diseases, U. S. Army[4], made studies on transmissability. Seventy-eight human volunteers, isolated from one another, were inoculated intranasally with pooled sputa and throat washings from seven soldiers with frank primary atypical pneumonia. Washings were used untreated, autoclaved, or passed through Seitz filters. Sixteen men developed characteristic disease including lung lesions; twenty-six more developed "minor illness" varying from mild upper respiratory symptoms to a sharp febrile episode resembling atypical pneumonia except for absence of lung lesions.

In this experiment there is proof of transmissability from man to man and an interesting suggestion of relationship with a modification resembling "clinical influenza."

The investigations of Hare, Hamilton and Feasby[7] indicate a close association between primary atypical pneumonia and influenza B and influenza of unidentified type. Van Ravenswaay[12] has noted its association with influenza A and B.

The close relationship which seems so apparent clinically has not to my knowledge been proved by inoculation from clinical influenza to produce atypical pneumonia; reversal is suggested in some effects of the experimental inoculations done by the Commission no Acute Respiratory Diseases, U. S. Army, but the resultant illness was not proven influenza.

Indeed, one should not lose awareness of the fact that no scientific proof has ever appeared that a relationship closer than association exists between influenza and atypical pneumonia.

Among our own patients, with cases of both diseases together in a ward, there has been apparently no cross-infection; an immunity is suggested here. In contrast, four of six medical officers in attendance on those patients contracted atypical pneumonia during one winter.

There is nothing difficult to appreciate in the thought that identical lung lesions are the product of a heterogenous influenzal group; we accept the fact that identical lesions are produced by a very heterogeneous group of pneumococci.

No the least of blessings from definite alliance would be the chance to attain a more satisfying name to replace "primary atypical pneumonia of unknown etiology"—we would gladly dispense with five of the words. Good evidence that the word "virus" could legitimately be used arrived in 1945[11] but the word, in absence of specific qualification, is still unsatisfactory. So, too, is the word pneumonia if the lung lesions represent merely one form or degree of a disease of larger implication.

REFERENCES

1. Allen, W. H.: Annals Internal Med., 10:441-446, Oct., 1936.
2. Boyd, Textbook of Pathology, 1943.
3. Commission on Acute Respiratory Diseases (U.S.A.) for 1943-44.
4. Commission on Acute Respiratory Diseases, Army Epidemiological Board, U. S. Army, Annual Report, 1944-45.
5. Dingle *et al*, Amer. Jour. of Hygiene, Jan., Mar. and May, 1944.

6. Drew, Samuel and Ball, Lancet, June 19, 1943.
7. Hare, Hamilton and Feasby, Canadian Journal of Public Health, Oct., 1943.
8. Karpel, Waggoner and McCown, Annals of Internal Medicine, Mar., 1945.
9. Major E. B. Kay, Archives of Int. Med., Feb., 1945.
10. Sq.-Comm. J. F. Meakins, C. M. A. Journal, April, 1943.
11. Scadding, J. G., B.M.J., Nov. 13, 1937.
12. Van Ravenswaay et al, J.A.M.A., Jan. 1, 1944.
13. Wier and Horsfall, Jour. of Experimental Med., Nov., 1940.

THE DIAGNOSIS AND TREATMENT OF CHRONIC PROSTATITIS ASSOCIATED WITH NON-SPECIFIC URETHRITIS

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(Preliminary Report)

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Read at the Annual Meeting of the British Columbia Medical Association, September, 1945.

One of the major medical problems in the armed services today is the diagnosis and treatment of chronic urethral discharge and chronic prostatitis. In a short while this will become a civilian problem. The magnitude of this problem is in part due to an increased incidence of the disease, but chiefly due to the fact that effective treatment of the chronic cases has, we believe, been almost unknown. The results of routine treatment carried out under our direction were so unsatisfactory and discouraging as to make it obvious that we should concern ourselves with this problem.

Early in May, 1945, routine treatments using sulfonamide therapy, penicillin—100,000 units, irrigations, diathermy, and urethral dilatations, was discontinued. In an endeavour to find a more satisfactory form of therapy a detailed investigation of the cases that had falied to respond to the accepted forms of therapy was carried out. One hundred and fifty cases have been studied to date. This report deals with the first one hundred so studied. It was found that the cases could be divided into three main groups: those with (1) a previous history of gonorrhœal urethritis, (2) a previous history of non-specific urethritis, and (3) no previous history of urethritis. In this third group the main complaints were varied, but urological in nature.

All of these patients had had one to ten previous hospital admissions, the average number being three. The average number of hospital days was 4.8 days, the maximum number being 120 days. The range in years was from nineteen to fifty-three years of age; the average age being 26.5 years.

In one hundred cases studied, as indicated in Table I, 36% of cases had a previous history of gonorrhœa. In an additional 50% there was a history of a previous urethral discharge which had been reported negative for gonorrhœa, and classified as non-specific urethritis. The remain 14% had no previous evidence of urethritis. The symptomatology is also indicated in Table I.

The chief symptoms complained of were: urethral discharge, frequency, burning terminal hæmaturia, vague perineal discomfort, and backache. In the group of cases in which there was a previous history of gonorrhœa or non-specific urethritis, urethral discharge was present in 84% to 91% of the cases; being the presenting symptom in over 70% of the cases. In Group III, in which there was no previous history of urethritis, a urethral discharge was the presenting symptom in only 21%. Pyuria without symptoms was present in 28% of this group; while vague perineal discomfort, frequency, and backache, were present in another 21%. This is the group in which the diagnosis is so apt to be overlooked. A combination of these symptoms existed in many patients.

TABLE I.
SYMPTOMATOLOGY

	Group I Previous History of Gonorrhoea		*Group II* Previous History of N.S.U.		*Group III* No Previous History of Urethritis		*Total of 3 Groups*
Symptoms:	No. of Cases 36	% 36	No. of Cases 50	% 50	No. of Cases 14	% 14	No. of cases and percent. 100
Urethral Discharge							
Presenting Symptom	26	72	35	70	3	21.5	80
Associated Symptoms	7	19	7	14	2	14.5	16
Total		91		84		35	
Frequency	1	3	1	2			2
Burning			1	2	1	7	2
Terminal Haematuria					1	7	1
Vague Perineal Discomfort	1	3	4	8	1	7	6
Backache	1	3			2	14	3
Signs:							
Pyuria (without symptoms)			2	4	4	28	6
Total						28	

In those who had a discharge, it was a thin, watery grey in 90%, and thick mucoid material of varying shades of yellow, in the remaining 10%.

SOURCE OF ORIGIN.—The majority of these patients gave a history of alcoholism and sexual excess immediately preceding the onset or recurrence of symptoms. We believe this is a factor in lowering the resistance of the urethra and prostate, favouring subsequent invasion by: (a) Organisms from the host which are normally non-pathogenic. They may reach the prostate via lmphatics or possibly the blood stream. (b) Exacerbation of a previous prostatitis in which there is still some residual infection present. (c) Organisms from a carrier that may or may not be pathogenic to the carrier. In two cases there was no extramarital exposure, and the wives did not exhibit any signs or symptoms of infection.

BACTERIOLOGY.—The bacteriology showed on direct smear and culture: staphylococci alone in 55 cases, diphtheroids in 10 cases, and staphylococci in combination with micrococci, streptococci, and trichomona, in an additional 32 cases. Gonococci were found once, and trichomonas vaginalis twice.

A diagnosis was made by: (1) the history and symptoms, (2) the presence of a urethral discharge, (3) the three glass urinalysis, and (4) the examination of the prostatic fluid.

The symptoms of urethral discharge, frequency, burning, terminal hæmaturia, and vague perineal discomfort, are almost pathognomonic of the condition present. Palpation of the prostate is not indicative of the disease present. In some cases the gland is firm and fibrosed; in others it is soft and normal to palpation, thus indicating that an examinaion of the prostatic fluid is an essential step in the establishment of a diagnosis.

TREATMENT.—In five cases, preceding the hundred reported in this series, Stilbesterol, 6 mgm. was given daily for one week. There was some clinical improvement, but the number of pus cells in the prostatic fluid was not materially reduced. Stilbesterol therapy was discontinued for this reason, and because of the established fact that administration over a period of time will result in sterility.

In considering returning to penicillin therapy we felt that with the usual courseof 100,000 units of penicillin in twenty-four hours, the degree of tissue saturation was

probably adequate, but that it was not maintained for a sufficient length of time. It was therefore decided to give experimentally 25,000 units every four hours for fourteen days, and to observe the results obtained. A total of 2,100,000 units of penicillin was given each patient. (Studies of the urine and blood penicillin levels were not carried out.) On admission, cultures for gonorrhœa and other organisms were taken from either the urethral discharge, or prostatic fluid. Bi-weekly examinations of the discharge or prostatic fluid were made, and the cell count noted. It was found that symptomatic improvement was first noticed at the fifth to the tenth day of treatment, usually occurring at the seventh day, at which time there was also found an appreciable decrease in the number of pus cells in the prostatic fluid. In many cases the prostatic fluid is obtained by gentle compression of the gland without true massage.

In classifying the results obtained, a "cure" is defined as one in which (a) the patient is entirely asymptomatic, and there is no urethral discharge, (b) the three glass urinalysis is normal, (c) the prostatic fluid on culture is negative for gonococci, (d) the number of pus cells in the prostatic fluid is reduced to below five per H.P.F., and (e) re-examination in three months' time confirms these findings. Re-examination is carried out routinely at monthly intervals. "Apparently cured" would indicate that the patient has satisfied the criteria (a) to (d) above, but has not yet returned for the three-month check-up. The term "improved" is used to indicate that the patient is asymptomatic, but the prostatic fluid shows more han five pus cells per H.P.F. and less than twenty. The term "failure" is used to indicate those cases in which symptoms or signs persist.

COMPLICATIONS OF TREATMENT.—There were six failures on penicillin therapy alone, for the reasons shown in Table II.

TABLE II

COMPLICATIONS — FAILURES ON PENICILLIN THERAPY ALONE

Complications in all three Groups	No. of Cases	Additional Treatment Carried Out	End Result of Treatment	
			Cured	Apparently Cured
Redundant foreskin	2	Circumcision	1	1
Small external urinary meatus	1	Meatotomy		1
Stricture of urethra	1	Ureteral dilatation		1
No stricture of urethra on calibration	2	Ureteral dilatation and Urethroscopy		2

When the complications were corrected by circumcision, meatotomy, or dilatation, as indicated, the end results were satisfactory. Calibration of the urethra with bougie-à-boule is always carried out before urethral dilatation. One was cured and five were apparently cured. If these five maintain their status at the three-month examination they will then be classified as "cured."

There were two cases of Trichomonas Vaginalis. They were treated with Atabrin, gr. 1½ three times a day for five days. In one the discharge disappeared entirely; in the other, a mixed infection, the discharge continued but trichomonas was absent.

END RESULTS OF TREATMENT.—All 100 patients were asymptomatic at the time of discharge from the hospital, soon after the completion of the two weeks of treatment. (Table III and Table IV.)

TABLE III

END RESULTS OF TREATMENT

Group I—36 cases
(Previous history of G.C. Urethritis)

	On Discharge From Hospital		On 2-Month Re-Examination		On 3-Month Re-Examination	
	No.	%	No.	%	No.	%
Cured	---	-----	---	-----	4	
Apparently Cured	25	69.4	26	72.2	---	

Improved	11	30.6	5	13.9	1
Failure	----	------	----	------	
No follow-up available	----	------	5	13.9	31
Group II—50 cases (Previous history of N.S.U.)					
Cured	----	------	----	------	9
Apparently cured	38	76.0	35	70.0	----
Improved	12	24.0	4	8.0	4
Failure	----	------	1*	2.0	----
No follow-up available	----	------	10	20.0	37
Group III—14 cases (No previous history of urethritis)					
Cured	----	------	----	------	1
Apparently cured	12	85.7	13	92.8	----
Improved	2	14.3	1	7.2	1
Failure	----	------	----	------	----
No follow-up available	----	------	----	------	12

* There was one recurrence in Group II.

TABLE IV

END RESULTS OF TREATMENT

Total of all 3 Groups—100 Cases

End Results	On Discharge From Hospital No. of Patients Percent	On 2-Month Re-Examination No. of Patients Percent	On 3-Month Re-Examination No. of Patients Percent
Cured	----	----	14
Apparently Cured	75	74	----
Improved	25	10	6
Failures	----	1 (recurrence)	----
No follow-up available	----	15	80

75% of them were "apparently cured" (the number of pus cells in the prostatic fluid was below five per H.P.F.), and the remaining 25% were "improved" (the number of pus cells in the prostatic fluid was above five per H.P.F., but below twenty). At the re-examination, two months later, 74 were still "apparently cured" and 10 "improved," although 15 could not be traced. There was one recurrence in this group. He denied re-exposure. He was readmitted to the hospital and treated with irrigations of Protargol, ¼ of 1% four times a day. He was not given any further penicillin treatments. Urethroscopy showed an apparently normal urethra. He was discharged from the hospital, asymptomatic and improved, two weeks later. The results for the three-month re-examination are not yet available. Of the twenty patients who were due for this examination and have reported back, fourteen were cured, and six were improved. All twenty were asymptomatic.

INFORMATION OBTAINED FROM STUDIES OF AN ADDITIONAL FIFTY CASES NOT REPORTED IN THIS GROUP.—As already stated, there have been fifty cases investigated in which the study is not yet completed. We have learned some interesting facts from these additional cases.

Caspar, in a study of the cultural characteristics of gonococci, has made what we consider to be a most significant observation. He has in many instances been able to curette from the urethra of so-called "cured" cases of gonorrhœa, a large monoform cell which on culture grows out a gram negative diplococcus, and on transfer to a new host produces gonorrhœa. We have constantly looked for such a cell, and frequently found a similar type, although in our cases we believe it is an intermediate stage of a non-neisserian organism. This impression is confirmed by by our own experiences in another study, wherein the urine from cases of cystitis and pyelonephritis is cultured. On many occasions a peculiar large monoform cell, about four times the size of a staphylococcal organism, has been grown out, and the organism on culture would appear

to defy identification. By repeated subculture and the elapse of one month's time, this large cell would eventually produce what was readily recognized as a gram negative organism, frequently Bacillus Coli. Caspar pointed out that this large monoform cell in gonorrhœa may be the factor responsible for recurrence of infection, or relapse after treatment.

In five of the additional cases studied, we have found no improvement either symptomatically or in the prostatic fluid at the end of the two week course of penicillin therapy; these temporary failures were all given a second course of penicillin (25,000 units every four hours for fourteen days) at the end of which time three were cured, and two remained infected. Another case in which the penicillin was continued, because of Vincent's Angina (Trench Mouth); five million units of penicillin were given. He became asymptomatic on the seventh day, but the prostatic fluid remained grossly infected throughout, showing over one hundred pus cells per H.P.F. Two points are obvious here. The first is that the organisms may possibly become "penicillin resistant," as has been claimed by many workers to occur with a variety of organisms. The second is the desirability of a means of treating these patients as ambulatory cases. This may possibly be achieved by the use of penicillin in peanut oil, or other oil base, in which case one dose would be given daily, and absorption would continue slowly over a period of time. So far we have been unable to obtain penicillin in an oil base.

In a few of the failures to penicillin therapy alone, we have used a combination of penicillin intramuscularly, and sulfathiazole with methylene blue parenterally. A synergism between sulfathiazole and penicillin has been decribed, and more recently a synergistic action between certain dyes and penicillin. "This is based on the theory that the bacteriostatic agent may 'poise' the oxidation reduction potential in the immediate environment of the cell at a level which will preclude the normal functioning of one or more desmolytic enzyme systems." In one case so treated, in which the urethral discharge was due to staphylococci and diphtheroids, the result was spectacular, the discharge stopped the same day. In another case so treated, with the same type of bacteriology, there was no noticeable change.

In the new cases presenting, we do not hesitate to do a circumcision or meatotomy if we feel that the drainage of the urethral canal is in any way interfered with, or recontamination may be occurring. We are carrying out urethroscopy in most of these cases, and have observed that although a urethral discharge is present in nearly 80% of them, that in the majority the anterior urethra looks perfectly normal on urethroscopy, and the prostatic urethra is intensely engorged and inflamed. This suggests the possibility that the urethral discharge present may be due to an excessive inflammatory prostatic secretion, and in fact may be a prostatorrhœa rather than a urethritis. It is our impression that in many cases this is so, but as yet we have found an insufficient number of cases for proper evaluation. On this basis one might question the correctness of the diagnosis in those patients who had a previous history of non-specific urethritis. Was it really a urethritis or was it a prostatitis with excessive prostatic secretion?

We have given up the use of urethral irrigations and pelvic diahermy inthe se casee, because the results of treatment with two-week courses of penicillin appear to be so satisfactory, and the results with diathermy and lavage so disappointing.

The authors wish to thank Dr. Fred Smith, Associate Professor of Bacteriology, McGill University, for the valuable suggestions which he has made in carrying out penicillin therapy.

CONCLUSIONS

1. A study of chronic prostatitis associated with non-specific urethritis has been made. A preliminary report of 100 treated cases is presented.

2. The cases divided themselves into three main groups: (1) those with a previous history of gonorrhœal urethritis; (2) those with a history of a previously diagnosed non-specific urethritis, and (3) those with no previous history of urethritis.

3. A urethral discharge was present in 84% to 91% of the cases in Groups I and II, being the presenting symptom in 70%. It was the presenting symptom in only 21%

of the cases in which there was no previous history of urethritis, urinary frequency, backacha, terminal hæmaturia, and vague perineal discomfort, were frequent symptoms.

4. Pyuria without symptoms was present in 28% of the group with no previous history of urethritis.

5. Alcoholic and sexual excess are believed to be predisposing factors which lower the resistance of the urethra and prostate, favouring subsequent invasion by: (1) organisms from the host which are normally non-pathogenic, (2) exacerbation of a previous prostatitis in which there is still some residual infection present, (3) organisms from a carrier that may or may not be pathogenic to the carrier.

6. The bacteriology found on culture was staphylococci alone in 55 cases, diphtheroids in 10, and staphylococci in combination with micrococci, streptococci, and trichoma in 32 cases. Gonococci were found once, and trichomonas vaginalis twice.

7. A diagnosis was made by: (1) the history and symptoms, (2) the presence of a urethral discharge, (3) the three glass urinalysis, and (4) the examination of the prostatic fluid.

8. Palpation of the prostate is not indicative of the disease present. Examination of the prostatic fluid is essential.

9. Criteria of "Cured," "Apparently Cured," "Improved," and "Failure" are defined: "Cured" is one in which (1) the patient is entirely asymptomatic and there is no urethral discharge, (2) the three glass urinalysis is normal, (3) the prostatic fluid on culture is negative for gonococci, (4) the number of pus cells in the prostatic fluid is reduced to below 5 per H.P.F., and (5) re-examination in three months time confirms these findings.

10. Treatment with Stilbesterol, urethral irrigations, sulfonamides, 100,000 units of penicillin, and pelvic diathermy, were all found to give unsatisfactory results.

11. Penicillin, when given in doses of 25,000 units every four hours for fourteen days gave an "Apparently Cured" in 75% of cases, and the remaining 25% were improved. All were asymptomatic at the completion of treatment.

12. Symptomatic improvement occurred on the fifth to the tenth day, usually on the seventh. A decrease in the number of pus cells in the prostatic fluid coincided with the symptomatic improvement.

13. There were six temporary failures, or complications in the group, requiring particular treatment, such as circumcision, meatotomy, urethral dilatation, etc.

14. In smears of the urethral discharge or prostatic fluid a large monoform cell is frequently seen, which we believe is an intermediate stage of the pathogenic organism present in that particular individual.

15. In further cases studied, five temporary failures are given a second course of penicillin, 25,000 units every four hours for fourteen days, with three apparent cures and two remaining infected.

16. In some of the temporary failures, penicillin is given intramuscularly, and sulfathiazole with methylene blue given orally. In one case the urethral discharge, which had been present for one month, ceased the same day .

17. Urethroscopy has been carried out on a gradually increasing number of this type of case. It is our impression that the anterior urethra is entirely normal in the majority of these patients, though the prostatic urethra is intensely inflamed. It is thought that the urethral discharge present may be due to the prostatitis causing an excessive inflammatory prostatic secretion rather than due to a true urethritis. On this basis, the cases which have previously been diagnosed as non-specific urethritis may be open to question.

JULY, 1945, BULLETINS WANTED

Doctors who have on hand copies of the July, 1945, "Bulletin" with which they are finished, are urgently requested to turn them in to the Library, at the earliest opportunity.

NEWS AND NOTES

We regret to record the passing of three members of the profession in British Columbia: Dr. Bruce S. Smith of Vancouver, on September 25th; Dr. Benjamin deF. Boyce of Kelowna on September 25th; and Dr. B. S. Walker of Summerland on September 24th.

Sympathy is extended to Dr. and Mrs. J. A. Porter of Vancouver in the loss of their two months old son.

* * * *

Congratulations are being received by Dr. and Mrs. R. S. Woodsworth of Kelowna on the birth of a son, and by Capt. and Mrs. K. P. Groves of Vancouver on the birth of a son, on October 9th.

* * * *

Among the many prisoners of war who have been repatriated from Japan is Captain J. A. G. Reid of Vancouver. Captain Reid was attached to the Winnipeg Grenadiers and taken prisoner when Hongkong fell on Christmas Day, 1941. The men were kept at Hongkong until early in 1943 when they were transferred to Camp Tokyo, and later to the notorious coal mine slave camp, Sendai No. 1. Captain Reid has the very best wishes of the profession in establishing himself again in civil life.

* * * *

Lieut.-Col. J. H. Sturdy, R.C.A.M.C., has received his discharge and is now located at the Vancouver General Hospital in the Department of Pathology.

* * * *

Lieut.-Col. W. L. Boulter, R.C.A.M.C., has returned to Vancouver following service in casualty clearing stations in Italy, France, Belgium and Holland.

* * * *

Colonel M. McC. Baird, who recently returned from service overseas, has received his discharge from the Army, and is returning to practice in Vancouver.

* * * *

Capt. L. A. Patterson is now out of the Army, and located in Vancouver.

NOTICE

It has been brought to our attention by the Pharmaceutical Association of the Province of British Columbia that some members of the profession are using prescription pads which designate certain drug firms. Inasmuch as this is contrary to the Medical Act we would like to draw the matter to the attention of each and every medical practitioner in the Province of British Columbia.

A. J. MacLACHLAN,
Registrar.

ANNUAL DINNER

The Annual Dinner of the Vancouver Medical Association will be held on Friday, November 30th, at 7:00 p.m., in the Banquet Room of the Hotel Vancouver.

The Annual Dinner is being resumed this year after being discontinued for the duration of the War. This will be an occasion to fittingly welcome home those members of the profession who have been in the Armed Forces.

De luxe entertainment will be provided and the dinner follow all the pre-war traditions.

It is requested that all life members and holders of the P. G. F. Degree will make a special effort to attend.

Members of the Services and new practitioners in the city will be welcomed.

Major A. B. Manson, R.C.A.M.C., has returned to civilian life and to his former office in the Medical-Dental Building, Vancouver.

* * * *

Major E. J. Curtis, R.C.A.M.C., has received his discharge from the Army, and will join Dr. J. A. Ganshorn, recently discharged from the R.C.A.M.C., in their former offices in the Medical-Dental Building, Vancouver.

* * * *

Surgeon-Lieut. J. M. Murray of Vancouver has received his discharge from the Navy, as has Surgeon-Lieut. A. J. Venables, who is at present in Newfoundland.

* * * *

Major K. J. Haig has received his discharge from the R.C.A.M.C., and has resumed practice in Orthopædics, with offices in the Medical-Dental Building, Vancouver.

* * * *

Dr. W. T. Lockhart of Vancouver has retired from active practice following many years of service. Doctor Lockhart has been a very active member of the Vancouver Medical Association for a number of years, holding the positions of Treasurer of the Association, a Trustee, and Chairman of the Relief Administration Committee. He has our best wishes for a happy retirement.

* * * *

Capt. W. J. Endicott, R.C.A.M.C., has received his discharge from the Army and has resumed practice with the C. S. Williams Clinic at Trail.

* * * *

Dr. and Mrs. J. S. Daly of Trail were visitors in Vancouver during the week of the Annual Meeting of the British Columbia Medical Association.

* * * *

Dr. M. E. Krause of Trail has returned from a month's vacation.

* * * *

Doctors F. M. Auld, G. R. Barrett and W. Laishley of Nelson attended the Annual Meeting of the British Columbia Medical Association in Vancouver.

* * * *

Colonel W. E. M. Mitchell and Major G. B. Bigelow have resumed practice in Victoria, following their discharge from the Army.

* * * *

Dr. D. M. Baillie of Victoria has just returned from a trip to Eastern Canada. During his absence Dr. A. N. Reid did *locum tenens* for him.

* * * *

At the annual meeting of the Victoria Medical Society, held October 1st, the following officers were elected: President—Dr. T. M. Jones; Vice-President—Dr. G. B. B. Buffam; Honorary Secretary—Dr. W. E. M. Mitchell; Honorary Treasurer—Dr. A. B. Nash.

The following members were placed in office at the annual meeting of the Fraser Valley Medical Society: President—Dr. G. H. Manchester; Vice-President—Dr. J. G. Robertson; Secretary-Treasurer—Dr. J. T. Lawson.

* * * *

Lieut.-Col. S. A. Wallace has rejoined Dr. R. W. Irving's Clinic at Kamloops after an absence of almost five years' service in the R.C.A.M.C.

* * * *

Mrs. M. G. Archibald, relict of the late Dr. M. G. Archibald, died in Kamloops on October 10th, having outlived her husband just ten months.

* * * *

Surgeon-Lieut. W. S. Archibald has joined the Burris Clinic at Kamloops. He arrived home only a few hours before his mother was taken ill.

* * * *

Major O. C. Lucas of Victoria has returned from service overseas.

OBITUARY

DR. BENJAMIN DE FURLONG BOYCE of Kelowna, B. C.

The death of Dr. Boyce of Kelowna marks the passing of a pioneer in medicine in this province—and caused widespread mourning in the Okanagan Valley. Dr. Boyce was 75 years of age when he died of a heart attack, and was greatly beloved by the people of Kelowna, where he has practiced for nearly fifty years, from 1894 to 1940. Flags were flown at half-mast in token of the general sense of loss at his death, and prominent citizens in every walk of life bore testimony to the affection and respect that everyone felt for this beloved physician.

Dr. Boyce was a true pioneer physician, and practised "horse and buggy" medicine at its best. Strong and rugged of constitution, he took his full share not only in professional life, but as a citizen. He served in the C.A.M.C. in World War I and was active in all movements which pertained to the public welfare.

Dr. Boyce leaves a fragrant memory, as of the best type of physician, who helped to build his community and his country.

* * * *

DR. BRUCE S. SMITH of Vancouver

Obiit Sept. 25, 1945

Vancouver lost one of its old-timers in the recent death of Dr. Bruce Smith, who passed away suddenly in his apartment at 1245 Nelson St. Dr. Smith had practised in Vancouver steadily since 1909, when he graduated from McGill. Those of us who have been here for twenty-five years or more will remember him well as a quiet, most retiring man, of whom few of his colleagues knew more than his name. He practised chiefly internal medicine, and did not mingle freely with other medical men. But he was always genial and friendly, and had a wide practice in the city.

We extend our condolences to his sisters and family.

DR. DONALD MURRAY MEEKISON

The sudden and untimely death of Dr. Murray Meekison, of Vancouver, has come as a great shock to the medical profession, it is not too much to say, of the whole of British Columbia. Since his work was well known up and down the North Pacific Coast, there will be many in the States to our south, as well as throughout Canada, who will mourn the passing of this brilliant and accomplished orthopædic surgeon, who bade fair to be an outstanding leader in his specialty.

Dr. Meekison had been under terrific strain for a long time. Shortly after the outbreak of the war, he joined the R.C.A.F. medical services and proceeded overseas, where he was in charge of the orthopædic work of a large general hospital, and did excellent work. During this time he worked very hard, and his health was not good. As was his way, he threw himself entirely into his work, and lectures given by him since his return shewed how thoroughly and exactingly he did this work, keeping careful records, compiling statistics, and being ever on the search for better and more efficient methods.

After his return about a year ago, he took up an enormous practice, and worked day and night. He never seemed to rest, and undoubtedly worked much too hard. He suffered a heart attack some two weeks or so before he had another, and a fatal, seizure.

Murray Meekison will be greatly missed by all who knew him. He was earnest in his work, always willing to help the medical men amongst whom he worked with advice and counsel—given freely and most generously. It is superfluous to say that his own work was of the highest order, and he was recognised by leaders in his department of medicine as one of the outstanding orthopædists of Canada.

We extend our sincerest sympathy to his family.

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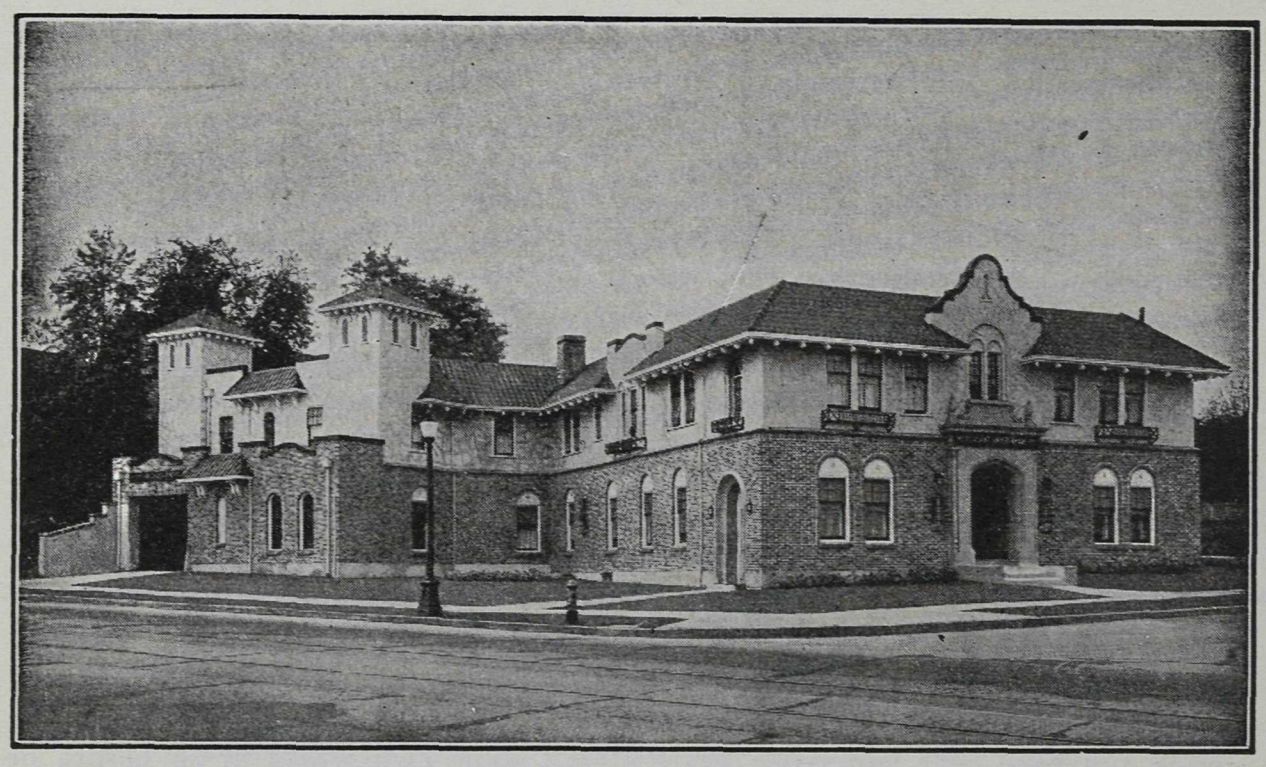

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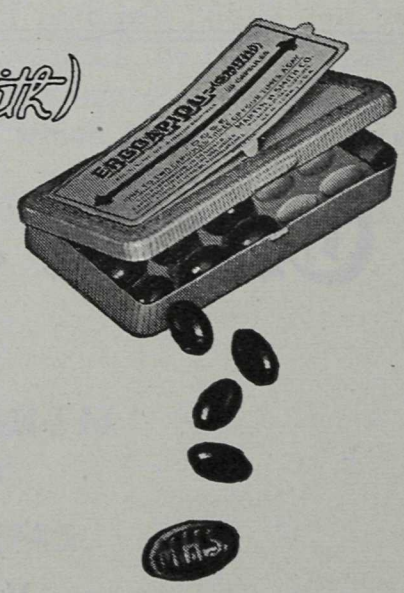

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1. Lund, Curtis, J., Kimble, Marion S., Plasma Vitamin A and Carotene of the Newborn Infant, Am. J. Obs. & Gynec. 46:207:1943 (August).

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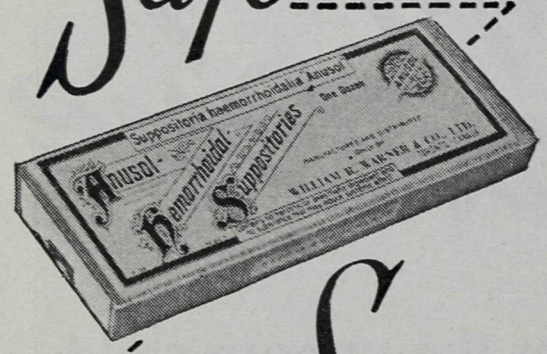

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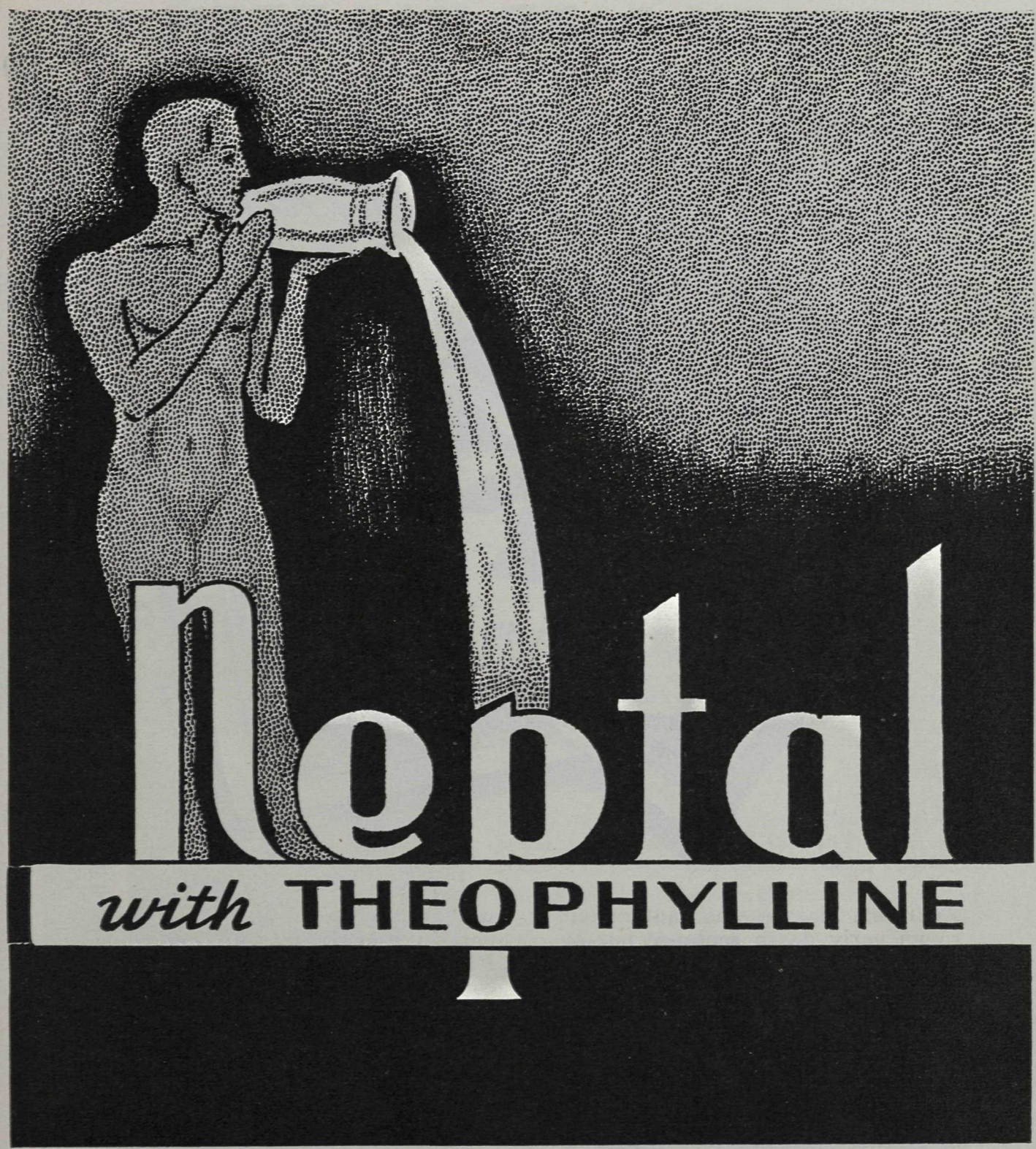

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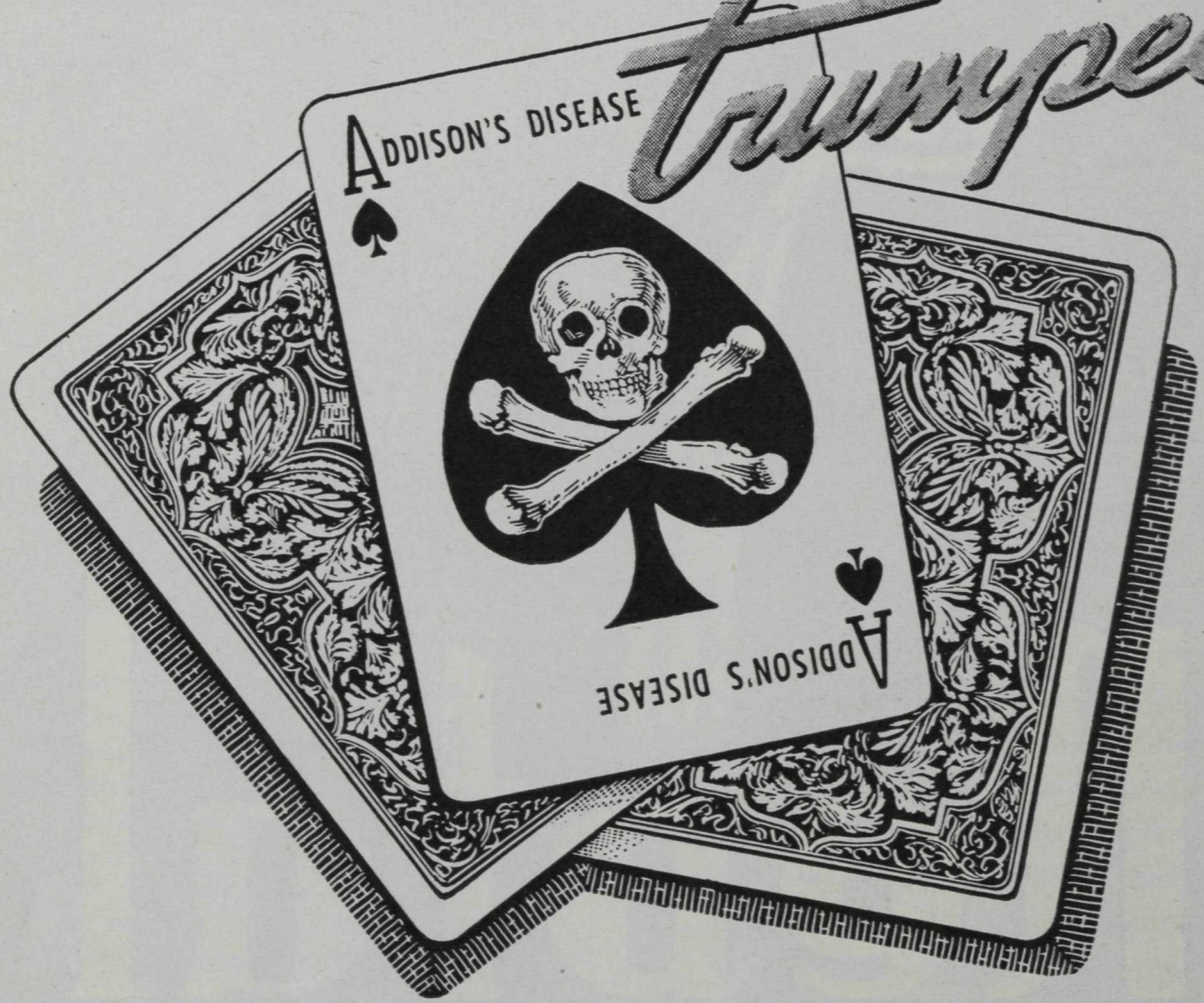

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1. Thorn, G. W.: J. Mt. Sinai Hospital, March-April, 1942
2. Loeb, R. F.: J.A.M.A., May 31, 1941.

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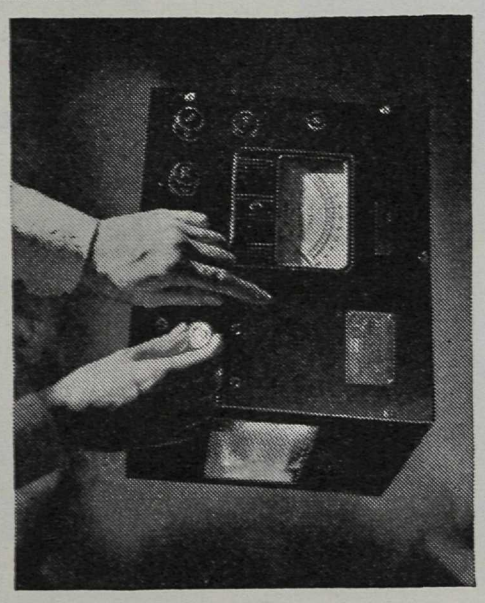

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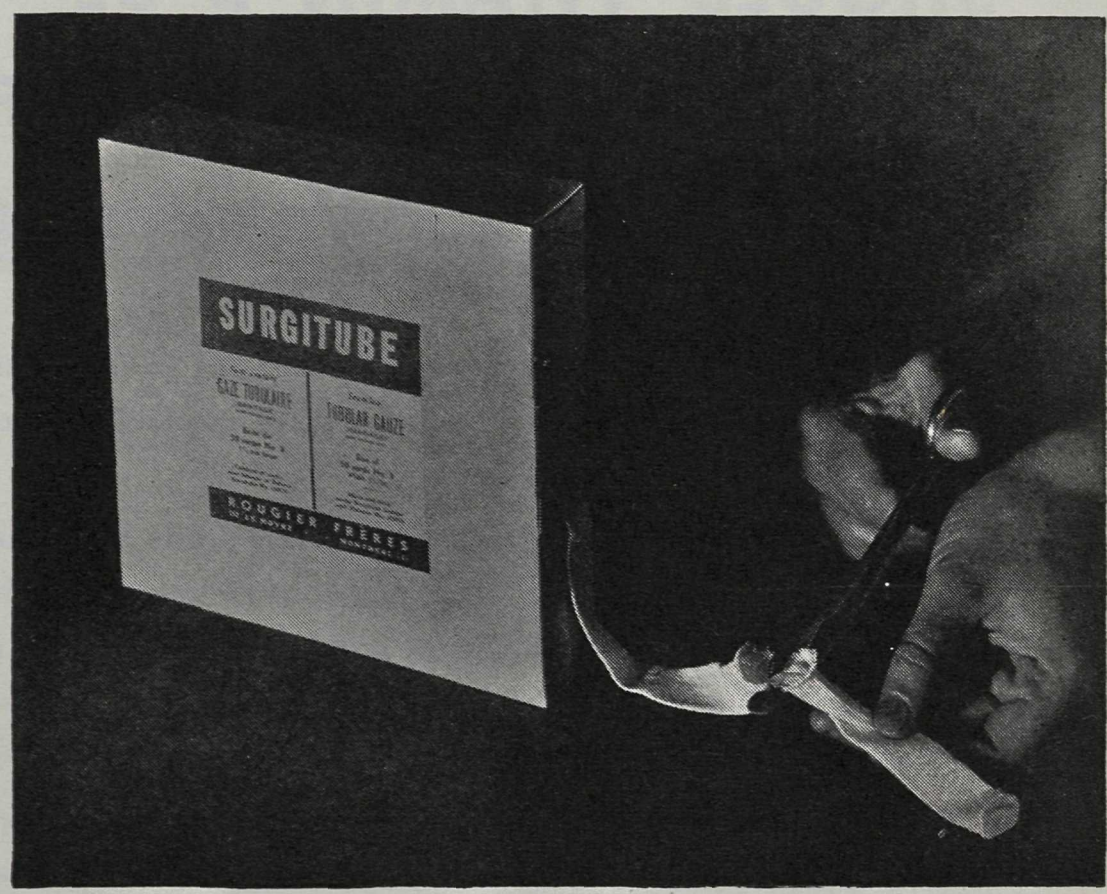

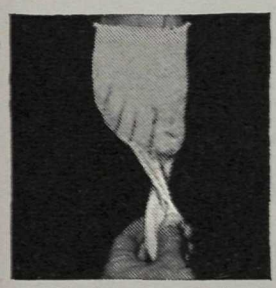

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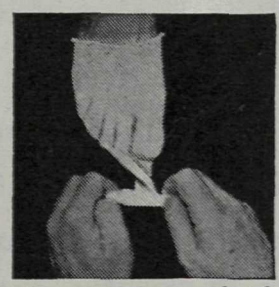
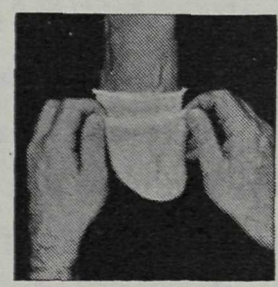
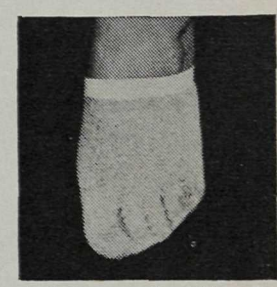


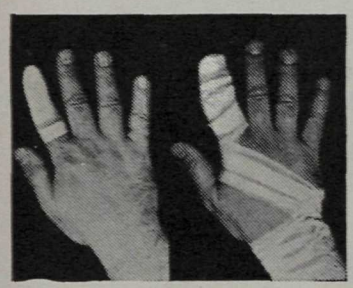
2. open free end of bandage and



3. double back over first part, then



4. bring ends of bandage together and apply adhesive tape to hold in place.



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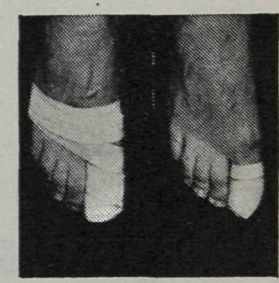

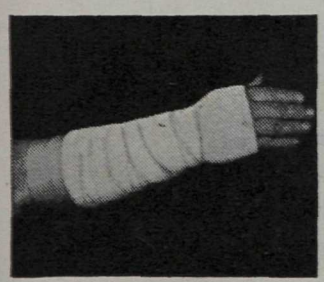

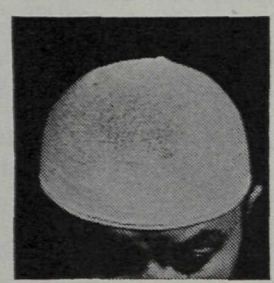

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*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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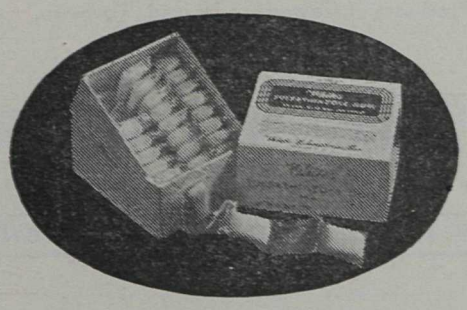

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*MacLeod and Hotchkiss, Amer. J. Obst. & Gynec., Sept. 1943

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Holmes was born in Cadiz, Spain. The ship in which his parents were travelling was captured by a French frigate and they were interned there. In 1801 the family arrived at Quebec, later moving to Montreal. Holmes was a pupil of Dr. Arnoldi, later continuing his studies abroad. In the year 1819 he returned to Canada and practised with his former teacher.

A dark man, short and slight in stature, Holmes was slightly stooped. He had a quiet, retiring manner but possessed an abundance of zeal, diligence and alertness. Christian principles characterized his life and he was known and respected for his beliefs.

Much of his free time was devoted to the study of the natural sciences. His extensive collection of the plants of Canada he presented to the Redpath Museum of McGill University. The library of McGill also benefited by his energies and he contributed, in no small measure, to building its collection of books.

Holmes was one of the first physicians in charge of the Montreal General Hospital and a member of its medical board. He was also active in all professional associations and for three years was president of the College of Physicians and Surgeons of Lower Canada.

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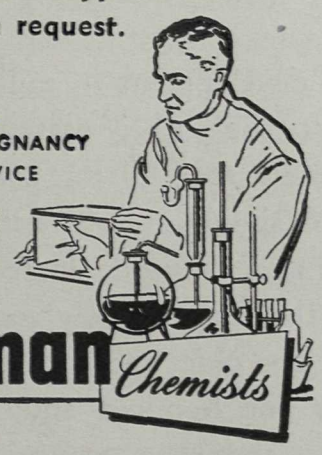

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INDEX TO VOL. XXI, BULLLETIN OF THE VANCOUVER MEDICAL ASSOCIATION, 1944-45

A

ARNOLD-CHIARI MALFORMATION—Allin Moore 108
ASSOCIATED HOSPITALS SERVICE OF BRITISH COLUMBIA 236

B

BATTLE, C. E.—The modern conception of burns—Review of literature 182
BELL, W. N.—Follicular lymphoblastoma—Review of literature and case report 67
BERRY METHOD OF CORRECTION OF PARALYSIS—S. E. C. Turvey 195
BEST, C. H.—Penicillin, non-clinical aspects 178
BOOK REVIEWS—
- Managing Your Mind—Kraines and Thetford 294
- Manual of Military Neuropsychiatry—Solomon and Yakovlev 92
- Marihuana Problem in the City of New York—Mayor's Committee on Marihuana 168
- My Second Life—T. H. Shastid 268
- Narco-Analysis—J. Stephen Horsley 169
- Psychosomatic Diagnosis—Flanders Dunbar 169

BOXALL, ERNEST A., and PRUETER, GORDON W.—Report of a case of tetanus with recovery 203
BRITISH COLUMBIA MEDICAL ASSOCIATION—
- Annual Meeting 215, 243, 295
- Annual Reports 245
- Committee on the Study of Cancer—Cancer Reporting in British Columbia 216
- District No. 4 Medical Association, Annual Meeting 57
- East Kootenay Medical Association Meeting 56
- Upper Island Medical Association, Annual Meeting 87
  - Spring Meeting 161
- West Kootenay Medical Association, Annual Meeting 57

BRITISH COLUMBIA BOARD OF HEALTH—Division of Venereal Disease Control, Distribution of free penicillin—venereal infection 201, 232
BRONCHIECTASIS IN SERVICE PERSONNEL—W/Cmdr. R. C. Laird, R.C.A.F. 261
BURKE, GERALD L.—Club Feet 99
BURNS, MODERN CONCEPTION OF—Review of literature—C. E. Battle 182
BURNS, THERMAL, TREATMENT OF—Stuart D. Gordon, Lt.-Col., R.C.A.M.C. 283

C

CANADIAN SURGEON FIGHTS AS PRIVATE 93
CARCINOMA OF THE CERVIX—Ethlyn Trapp 119
CARCINOMA OF THE CERVIX—UROLOGICAL COMPLICATIONS—L. R. Williams 128
- —LATE MANIFESTATIONS, LOWER BOWEL AND RECTUM—A. T. Henry 131
- —ASSOCIATED PAIN (Abridged Remarks)—Frank Turnbull 133

CHISHOLM, G. B.—Emotional problems of demobilization 53
CLUB FEET—Gerald L. Burke 99
COLLEGE OF PHYSICIANS AND SURGEONS OF B. C.—
- Election Results, 1945 143
- Medical Economics 159

COOKE, E. H.—Fatigue syndrome from the use of pneumatic tools 71
COOPER, HARRY G., and MacLEAN, JOHN T.—The diagnosis and treatment of chronic prostatitis associated with non-specific urethritis (preliminary report) 304

D

DAVIDSON, GEORGE A.—The diagnosis of a neurosis 49
DOLMAN, C. E.—The future of medical education from the standpoint of preventive and laboratory research 13
- Note on case of tularaemia 107
- Experimental trial of streptomycin in treatment of tularaemia 191

E

ECTOPIC GESTATION—W. A. Scott 81
ECTOPIC PREGNANCY—LEUCOCYTE COUNT IN—J. G. McPhee 110
EMOTIONAL PROBLEMS OF DEMOBILIZATION—G. B. Chisholm, Maj. Gen., R.C.A.M.C. 53
EMPLOYMENT OF LEISURE—Osler Lecture—A. H. Spohn 146

F

FATIGUE SYNDROME FROM THE USE OF PNEUMATIC TOOLS—E. H. Cooke 71
FIELD SURGICAL UNIT, ACTIVITIES OF—Rocke Robertson, Lt. Col., R.C.A.M.C. 205

G

GENITAL PROLAPSE—W. A. Scott 75
GORDON, STUART D.—The repair of deformities of the hand 279
- Mandibular fractures 281
- Treatment of thermal burns 283

H

HAND, REPAIR OF DEFORMITIES—Stuart D. Gordon, Lt. Col., R.C.A.M.C. 279
HARRIS, R. I.—Fractures of the os calcis: improved methods of treatment 43
HARRISON, ELLIOTT—An unusual case of pulmonary haemorrhage 135
HEALTH SERVICES FOR ALL—Reprinted from 'Plans for Progress," Saskatchewan 179
HEART DISEASE IN PREGNANCY—W. A. Scott 78
HENRY, A. T.—Late manifectation of carcinoma of the cervix (lower bowel and rectum) 131
HODGKIN'S DISEASE AND ALLIED CONDITIONS—Henry Jackson, Jr. 269
HOSPITALS APPROVED FOR GRADUATE TRAINING IN SURGERY 98

I

ITEMS OF GENERAL INTEREST 94, 136, 176

J

JACKSON, HENRY, JR.—Leukemia and allied diseases 253
Hodgkin's Disease and allied conditions 269

K

KITCHING, J. S.—Salmonellosis 217
KONONENKO, ILARION—Public health services in the Ukraine 199

L

LAIRD, R. C.—Low back pain 196
Common injuries in the region of the shoulder 220
Surgical treatment of pulmonary tuberculosis 222
Bronchiectasis in service personnel 261
LEUKEMIA AND ALLIED DISEASES—Henry Jackson, Jr. 253
LOW BACK PAIN—R. C. Laird, W/Cmdr. R.C.A.F. 196
LYMPHOBLASTOMA, FOLLICULAR—A review of the literature and case report—W. N. Bell 67

M

MANDIBULAR FRACTURES—Stuart D. Gordon, Lt.-Col., R.C.A.M.C. 281
MEDICAL EDUCATION, THE FUTURE OF—SYMPOSIUM—
From the standpoint of the clinician—G. F. Strong 9
From the standpoint of preventive medicine and laboratory research—C. E. Dolman 13
From the standpoint of public health—Stewart Murray 21
MEDICAL SCHOOL FOR BRITISH COLUMBIA 96
MEDICAL SERVICES ASSOCIATION—Annual report, 1944 27
MENTAL DISEASES, PREVENTION—G. H. Stevenson 63
MOORE, ALLIN—The Arnold-Chiari malformation 108
MURRAY, STEWART—The future of medical education from the standpoint of public health 21

Mc

MacLEAN, JOHN T., and COOPER, HARRY G.—The diagnosis and treatment of chronic prostatitis associated with non-specific urethritis (preliminary report) 304
McPHEE, J. G.—Leucocyte count in ectopic pregnancy 110
Pathological conference 228

N

NEUROSIS, DIAGNOSIS OF—George A. Davidson 49

O

OBITUARIES—
Archibald, M. G. 62
Bagnall, A. W. 47
Boyce, Benjamin deF. 312
Franckum, J. R. 118
Greer, R. F. 187
Meekison, D. M. 313
McCurdy, Gordon A. 58
McDiarmid, Colin A. 234
Smith, Bruce S. 312
Stringer, Lt.-Col. F. H. 187
Thomas, M. W. 48
Wray-Johnston, K. H. 234
OS CALCIS, FRACTURES OF—IMPROVED METHODS OF TREATMENT—R. I. Harris, Lt.-Col. R.C.A.M.C. 43
OSLER LECTURE—THE EMPLOYMENT OF LEISURE—A. H. Spohn 146

P

PARALYSIS, BERRY METHOD OF CORRECTION—S. E. C. Turvey 195
PENICILLIN, NON-CLINICAL ASPECTS—C. H. Best, Surg. Capt., R.C.N.V.R. 178
PHOTOGRAPHY EXHIBIT 233
PNEUMONIA, PRIMARY ATYPICAL—REVIEW—A. B. Walter, Col., R.C.A.M.C. 297
PRUETER, Gordon W., and BOXALL, ERNEST A.—Report of a case of tetanus with recovery 203
PROSTATITIS, CHRONIC, ASSOCIATED WITH NON-SPECIFIC URETHRITIS—DIAGNOSIS AND TREATMENT (Preliminary report)—Harry G. Cooper, F/Lt., R.C.A.F., and John T. MacLean, Surg. Lt. Cmdr., R.C.N.V.R. 304
PSYCHIATRY IN GENERAL PRACTICE—G. H. Stevenson 37
PUBLIC HEALTH SERVICES IN THE UKRAINE—Ilarion Kononenko 199
PULMONARY HAEMORRHAGE—UNUSUAL CASE—Elliott Harrison 135
PUMP, K. K.—Case report—tularaemia 105

R

ROBERTSON, ROCKE—Activities of a field surgical unit 205

S

SALMONELLOSIS—J. S. Kitching 217
SAXTON, G. D.—Some cases of extra-pulmonary tuberculosis 226
SCOTT, W. A.—Genital prolapse 75
Heart disease in pregnancy 78
Ectopic gestation 81
SHOULDER, COMMON INJURIES IN REGION OF—R. C. Laird, W/Cmdr., R.C.A.F. 220

SPOHN, A. H.—Osler lecture—The employment of leisure 146
STEVENSON, G. H.—Psychiatry in general practice 37
The prevention of mental diseases 63
STREPTOMYCIN, EXPERIMENTAL TRIAL IN TREATMENT OF TULARAEMIA—
C. E. Dolman 191
STRONG, G. F.—The future of medical education, from the standpoint of the clinician 9

T

TETANUS, REPORT OF A CASE WITH RECOVERY—Ernest A. Boxall and
Gordon W. Prueter 203
THIOURACIL, CASE REPORT—G. M. Wilson 286
TRAPP, ETHLYN—Carcinoma of the cervix 119
TUBERCULOSIS, PULMONARY, SURGICAL TREATMENT—R. C. Laird, W/Cmdr.,
R.C.A.F. 222
TUBERCULOSIS, EXTRA-PULMONARY, CASES—G. D. Saxton 226
TULARAEMIA, CASE REPORT—K. K. Pump 105
TULARAEMIA, NOTE ON CASE—C. E. Dolman 107
TULARAEMIA, EXPERIMENTAL TRIAL OF STREPTOMYCIN IN TREATMENT OF—
C. E. Dolman 191
TURNBULL, FRANK—Pain associated with carcinoma of the cervix (abridged remarks) 133
TURVEY, S. E. C.—The Berry method of correction of paralysis 195

V

VACCINATION, SOME OBSERVATIONS ON—Harold White 8
VANCOUVER GENERAL HOSPITAL—
Case reports 67, 108, 110, 135, 203, 226, 228, 286
VANCOUVER MEDICAL ASSOCIATION—
Annual reports, 1944-45 170
Doctor Bagnall and the medical library 36
Library notes 31, 35, 62, 92, 118, 143, 168, 192, 193, 214, 241, 268, 294
Message from the library 31
Relief administration committee 242
Summer School, 1945 ..... 144, 192
VICTORIAN ORDER OF NURSES—Classes for young mothers 164

W

WALTER, A. B.—A review of primary atypical pneumonia 297
WHITE, HAROLD—Some observations re vaccination 8
WILLIAMS, L. R.—Urological complications in carcinoma of the cervix 128
WILSON, G. M.—Case report—thiouracil 286

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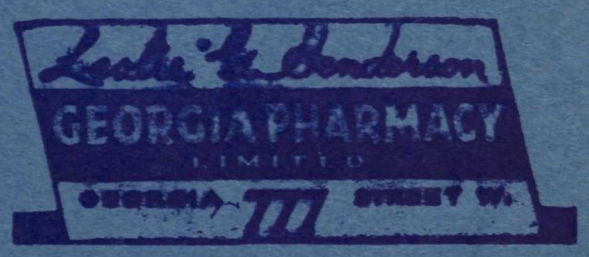

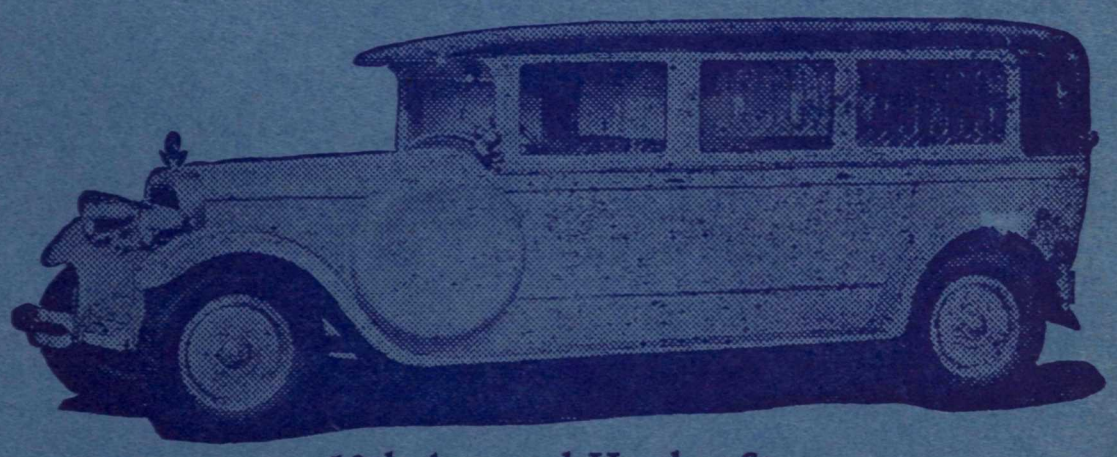

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