UNIVERSITY OF BRITISH COLUMBIA
MAY 19 1942
THE LIBRARY

The BULLETIN

of the

VANCOUVER MEDICAL ASSOCIATION

Vol. XVIII MAY, 1942 No. 8

With Which Is Incorporated
Transactions of the

Victoria Medical Society

the

Vancouver General Hospital

and

St. Paul's Hospital

In This Issue:

	Page
NEWS AND NOTES	227
ANNUAL REPORTS, VANCOUVER MEDICAL ASSOCIATION	231
CLEAR SPINAL FLUID IN MENINGOCOCCIC MENINGITIS	239
URETERAL OBSTRUCTION WITH COMPLICATIONS FOLLOWING SULFADIAZINE	242
THE USE OF SNAKE VENOMS IN MEDICINE	244
LAURENCE-MOON-BIEDL SYNDROME	251

C.M.A. AND B.C.M.A. ANNUAL MEETING
JASPER — JUNE 15-19, 1942

VITAMIN **K**

HYPOPROTHROMBINEMIA

THIS CONDITION results in abnormally long clotting time of the blood. It can be successfully treated with Vitamin K: E.B.S. The anti-haemorrhagic vitamin has a place, both as a prophylactic and in supportive therapy.

As prophylactic:

Administered to the mother before delivery or to the infant shortly after birth, Vitamin K: E.B.S. can prevent neonatal haemorrhage by raising the blood prothrombin to the normal range.

Danger to jaundiced patients, who must undergo surgery, can be greatly reduced by administration of Vitamin K and Bile Salts E.B.S. for several days before operation.

In supportive therapy:

Wherever there is a low prothrombin level in circulating blood, due to Vitamin K deficiency, treatment with Vitamin K may be of value. Such conditions are most frequent when bile is excluded from the intestinal tract, for various reasons, as common duct stricture, duct stone or adhesions in the region of the bile ducts. Similarly, Vitamin K may be useful in biliary fistulae, empyemia of the gall bladder with sepsis, catarrhal jaundice, moderate liver injury and obstruction due to carcinoma of the bile duct, of the gall bladder, of the head of the pancreas or of the liver. Bile salts are frequently necessary for absorption of Vitamin K in such conditions.

AVAILABLE FORMS

FOR ORAL USE: *S.C.T. No. 746 Vitamin K (2 Methyl 1:4 Naphthoquinone). —1 mg. (25,000 Dam Units).*

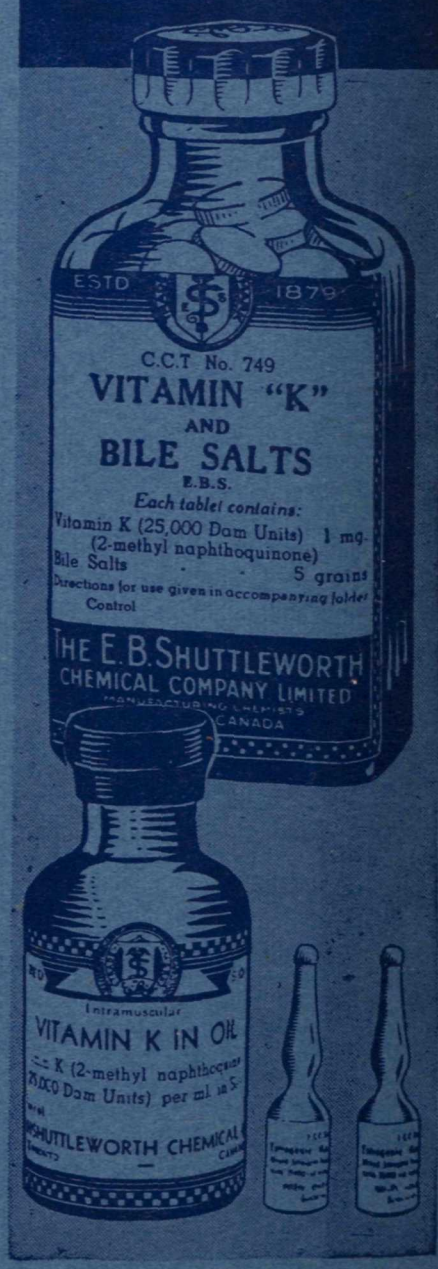
C.C.T. No. 749 Vitamin K (2 Methyl 1:4 Naphthoquinone). —1 mg. (25,000 Dam Units); and Bile Salts 5 grains.

FOR PARENTERAL ADMINISTRATION: *30 cc. No. A-130 Sterile Solution Vitamin K (2 Methyl 1:4 Naphthoquinone). 1 mg. (25,000 Dam Units) per cc. in Sesame Oil.*

1 cc. No. A-131 Sterile Solution Vitamin K (2 Methyl 1:4 Naphthoquinone). —1 mg. (25,000 Dam Units) per cc. in Sesame Oil.

1 cc. No. A-132 Sterile Solution Vitamin K (2 Methyl 1:4 Naphthoquinone).—½ mg. (12,500 Dam Units) per cc. in Sesame Oil.

E.B.S.



WHEN PRESCRIBING . . .
Specify E.B.S. Preparations

JUST TO BE SURE!

THE E. B. SHUTTLEWORTH CHEMICAL CO. LIMITED
TORONTO *MANUFACTURING CHEMISTS* CANADA

THE VANCOUVER MEDICAL ASSOCIATION

BULLETIN

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

Offices: 203 Medical- Dental Building, Georgia Street, Vancouver, B. C.

EDITORIAL BOARD:

DR. J. H. MACDERMOT

DR. G. A. DAVIDSON DR. D. E. H. CLEVELAND

All communications to be addressed to the Editor at the above address.

VOL. XVIII. MAY, 1942 No. 8

OFFICERS, 1941-1942

DR. J. R. NEILSON, *President*
DR. H. H. PITTS, *Vice-President*
DR. C. MCDIARMID, *Past President*
DR. GORDON BURKE, *Hon. Treasurer*
DR. A. E. TRITES, *Hon. Secretary*

Additional Members of Executive: DR. J. R. DAVIDSON, DR. J. A. MCLEAN

TRUSTEES

DR. F. BRODIE DR. J. A. GILLESPIE DR. W. T. LOCKHART

Auditors: MESSRS. PLOMMER, WHITING & CO.

SECTIONS

Clinical Section

DR. ROSS DAVIDSON.....Chairman DR. D. A. STEELE.....Secretary

Eye, Ear, Nose and Throat

DR. A. R. ANTHONY.....Chairman DR. C. E. DAVIES.....Secretary

Pædiatric Section

DR. G. O. MATTHEWS.....Chairman DR. J. H. B. GRANT.....Secretary

STANDING COMMITTEES

Library:
DR. F. J. BULLER, DR. D. E. H. CLEVELAND, DR. J. R. DAVIES, DR. A. BAGNALL, DR. A. B. MANSON, DR. B. J. HARRISON

Publications:
DR. J. H. MACDERMOT, DR. D. E. H. CLEVELAND, DR. G. A. DAVIDSON.

Summer School:
DR. H. H. CAPLE, DR. J. E. HARRISON, DR. H. H. HATFIELD, DR. HOWARD SPOHN, DR. W. L. GRAHAM, DR. J. C. THOMAS

Credentials:
DR. A. W. HUNTER, DR. W. L. PEDLOW, DR. A. T. HENRY

V. O. N. Advisory Board:
DR. L. W. MCNUTT, DR. G. E. SELDON, DR. ISABEL DAY.

Metropolitan Health Board Advisory Committee:
DR. W. D. PATTON, DR. W. D. KENNEDY, DR. G. A. LAMONT.

Greater Vancouver Health League Representatives:
DR. R. A. WILSON, DR. WALLACE COBURN.

Representative to B. C. Medical Association: DR. C. MCDIARMID.
Sickness and Benevolent Fund: THE PRESIDENT—THE TRUSTEES.

Ten Years Ago Johnnie Might Have Died

Johnnie is recovering from a very virulent type of streptococcic infection. A decade ago, before the widespread use of sulfonamides, his chances of recovery would have been slim.

And so it is with many other diseases. Diabetes was often fatal before Insulin: pneumonia before serotherapy and chemotherapy. Typhoid, diphtheria, measles, scarlet fever took their tolls before biologics stemmed the tide. Rickets and pellagra disabled thousands before vitamins were discovered. No cure was known for syphilis before the advent of arsphenamine therapy. Surgery was a torture before ether robbed the operating room of its terror.

All these and many other advances in medicine have been made since the founding of the House of Squibb. And in each field—anesthesia, biologic therapy, chemotherapy, endocrinology and vitamin therapy—Squibb has played a prominent part.

For 84 years E. R. Squibb & Sons has been dedicated to the task of furnishing the medical profession with the finest therapeutic products that manufacturing skill and experience can produce. Today, as always, the name "Squibb" on a label is an assurance of uniformity, purity, and efficacy.

E·R·SQUIBB & SONS OF CANADA, Ltd.
MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

The Priceless Ingredient of every product is the Honor and Integrity of its Maker

VANCOUVER HEALTH DEPARTMENT

STATISTICS—MARCH, 1942

Total Population—estimated	272,352
Japanese Population—estimated	8,769
Chinese Population—estimated	8,558
Hindu Population—estimated	360

	Number	Rate per 1,000 Population
Total deaths	330	14.3
Japanese deaths	4	5.2
Chinese deaths	17	22.8
Deaths—residents only	287	12.4
BIRTH REGISTRATIONS:		
Male, 286; Female, 251	537	23.3

INFANTILE MORTALITY:	March, 1942	March, 1941
Deaths under one year of age	12	14
Death rate—per 1,000 births	22.3	29.6
Stillbirths (not included in above)	4	9

CASES OF COMMUNICABLE DISEASES REPORTED IN THE CITY

	Feb., 1942		March, 1942		April 1-15, 1942	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Scarlet Fever	33	0	28	0	21	0
Diphtheria	3	0	2	0	0	0
Diphtheria Carrier	3	0	6	0	3	0
CChicken Pox	191	0	348	0	115	0
Measles	32	0	45	0	17	0
Rubella	25	0	54	0	20	0
Mumps	445	0	803	0	408	0
Whooping Cough	16	0	45	0	36	0
Typhoid Carrier	0	0	0	0	0	0
Typhoid Fever	0	0	0	0	0	0
Undulant Fever	1	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0
Tuberculosis	39	16	41	17	20	--
Erysipelas	3	0	3	0	3	0
Meningococcus Meningitis	3	1	4	0	3	0

V. D. CASES REPORTED TO PROVINCIAL BOARD OF HEALTH, DIVISION OF VENEREAL DISEASE CONTROL

	Burnaby	West Vancr.	Richmond	North Vancr.	Vanc. Clinic	Hospitals & Private Drs.	Totals
Syphilis	0	0	2	1	15	27	45
Gonorrhœa	0	0	0	0	61	12	73

A DYNAMIC MENTAL AND PHYSICAL TONIC

INDICATED IN THESE DAYS OF STRESS

BIOGLAN "A"

Another Product of the Bioglan Laboratories, Hertford, England

Stanley N. Bayne, Representative

Phone MA. 4027 1432 MEDICAL-DENTAL BUILDING Vancouver, B. C.

Descriptive Literature on Request

THE SCIENTIFIC HORMONE TREATMENT

NEUTRASIL

(Magnesium Trisilicate B.D.H.)

Whenever an antacid is required by patients of any age, Neutrasil is indicated. Its administration is not followed by an evolution of gas, so that none of the symptoms in a flatulent patient is accentuated. Large doses cannot produce alkalosis nor can they so lower gastric acidity as to stop gastric digestion.

Neutrasil is not completely neutralised immediately after ingestion; its action is therefore spread over a considerable period. Thus frequent doses are not required, and there is no stimulation of secretion of acid such as would necessitate any increase in the size or the frequency of subsequent doses.

Further, Neutrasil produces a soothing, adsorptive gel after neutralisation; this protects the irritated stomach walls and carries toxins and unneutralized acids into the intestine for elimination.

The shortcomings of antacids previously in use are thus eliminated in Neutrasil, to the use of which there are no contra-indications.

Stocks of Neutrasil are held by leading druggists throughout the Dominion, and full particulars are obtainable from:

THE BRITISH DRUG HOUSES (CANADA) LTD.
Toronto Canada

MEASLES

MODIFICATION »« PREVENTION

In 1939 there were 197 deaths from measles in Canada. More than 95 per cent of these were in the age-group 0-5 years.

Human serum prepared from the blood of healthy adults so as to involve a pooling from a large number of persons may be used effectively either for modification or prevention of measles. Modification is often preferable in that it reduces to a minimum the illness and hazards associated with measles, but does not interfere with the acquiring of the active and lasting immunity which is conferred by an attack of the disease. On the other hand, complete prevention of an attack of measles is frequently desirable, and can be accomplished provided that an ample quantity of serum is administered within five days of exposure to the disease.

For use in modification or prevention of measles, pooled human serum is available from the Connaught Laboratories in a concentrated form. While the recommended dose of this pooled and concentrated human serum for purposes of prevention is ordinarily 10 cc., the most usual dose is for purposes of modification and amounts to 5 cc. The serum is therefore supplied in 5-cc. vials. Prices and information relating to it will be supplied gladly upon request.

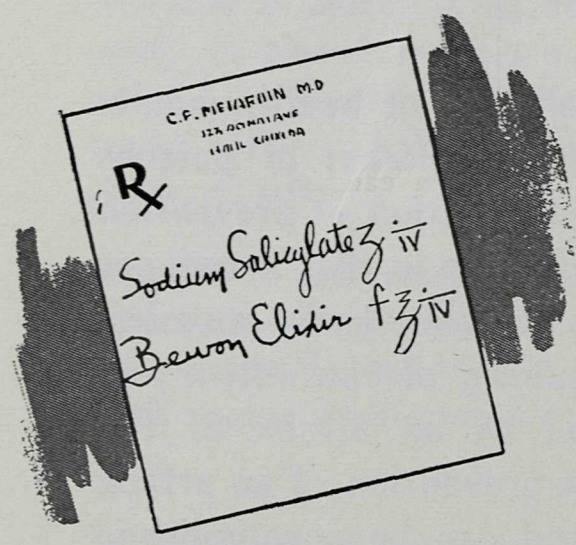
CONNAUGHT LABORATORIES
UNIVERSITY OF TORONTO

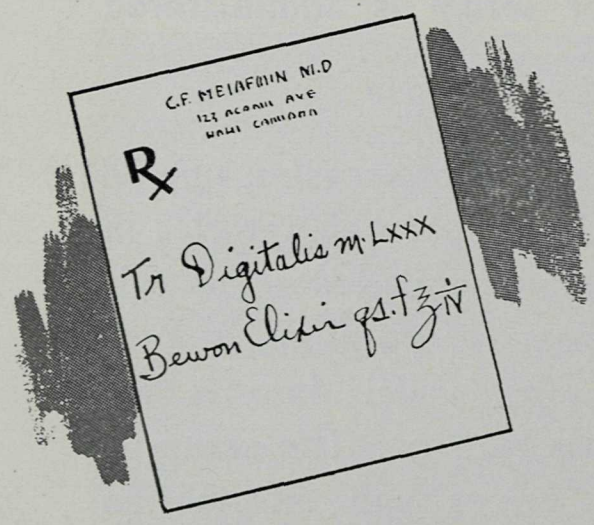
Toronto - Canada

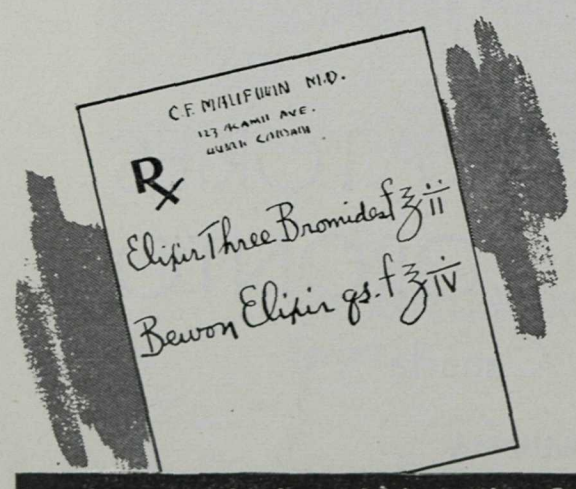
DEPOT FOR BRITISH COLUMBIA
MACDONALD'S PRESCRIPTIONS LIMITED
MEDICAL-DENTAL BUILDING, VANCOUVER, B.C.

A Vehicle that Stimulates Appetite

℞ Bewon Elixir Wyeth's q.s.







WYETH'S BEWON ELIXIR serves as an excellent solvent and vehicle for many medicaments. Compatible with most drugs, BEWON ELIXIR contains 18% alcohol and is slightly acid in reaction.

Standardized to contain 500 International Units of Vitamin B_1 (thiamin chloride) per fluid ounce, BEWON ELIXIR stimulates the appetite and is indicated in Vitamin B_1 deficiencies.

Supplied in 16 fl. oz. and 160 fl. oz. bottles.

John Wyeth & Brother (Canada) Ltd.
WALKERVILLE, ONT.

THE EDITOR'S PAGE

A friend of ours was reminding us recently that the BULLETIN has nearly attained its majority. The first number was published in 1924, and the Editor was our late lamented friend and colleague, Dr. J. M. Pearson of Vancouver. We could never have found a man better fitted to act as the leader of such a venture. Outwardly the least demonstrative of men, he had some deep and ardent enthusiasms—literary effort of any kind appealed to him strongly, and the BULLETIN rapidly became one of his major avocations: he invested even the small, apparently insignificant publication it then was, with a dignity and personality which it has, we believe, retained to this day.

For many years Pearson guided the BULLETIN along a carefully chosen way: conservative and unspectacular, no doubt—but nonetheless, we feel, the best way for such a publication. He had always a most intense loyalty to the Vancouver Medical Association—and cared little for other organizations. But we believe that he would have cordially approved the policy which opened the BULLETIN up to a wider "market," and has made it really more of a provincial than a local journal. It was he, in fact, that initiated this policy by opening its columns for the use of the Provincial Board of Health.

The BULLETIN is today, we modestly believe, a definite personality among the medical journals of Canada. It is not big, and most probably it will never be very much bigger, unless circumstances change very radically, but it fulfils, we think, the main functions of a medical journal of its kind: in that, first and foremost, it affords a means of expressing and recording medical work, thought, and opinion, in an area that otherwise would not have such a medium of self-expression. Much valuable work, many valuable and significant records and statistics, have been published and made available, which would otherwise have been lost. In this connection, we think especially of the monthly records from the Staff of the Vancouver General Hospitals, one of Canada's biggest hospitals, where an enormous amount of work is done. The records published by the Staff are in a great many cases of remarkable value and interest, and the BULLETIN is fortunate in the co-operation of this body. We feel that the Staff deserves our sincerest congratulations and thanks for their excellent work.

We do not know, of course, what percentage of our circulation reads the BULLETIN through from cover to cover: and we are rather hesitant to guess. But we ourselves have to read every word, in "proof" at any rate, and we assure our readers, or should-be readers, that there is always something from which they could derive benefit, in each month's copy. At times, the material is very much more than good: it is unique original work—and much of it is worth preserving for continual reference.

We could go on for ever—but perhaps we have said enough. The BULLETIN has, we think, contributed something of importance to the medical life of British Columbia, and finds a ready and often a vocal welcome in all parts of the province. It is the organ of other Associations beside the one whose name it bears; and it gets more than it gives from those to whom it tries to be of service. It is because it has given of its time and energy to British Columbia rather than Vancouver alone, we firmly believe, that it has been able to attain its majority, not only in years, but in a far wider sense, in value and importance to those who receive it.

ANNUAL MEETING
VANCOUVER MEDICAL ASSOCIATION

May 5, 1942

The Annual Meeting of the Association was held on the above date, the President, Dr. C. McDiarmid, being in the chair.

Dr. E. D. Braden, well-known clergyman of Vancouver, was our guest speaker. He has a delightful wit, and a wide knowledge of the history of Vancouver from its origin. Himself a native son of New Westminster, he has what some might feel is a bit of bias towards that city—but he spends most of his time in Vancouver, and after all, that is a very fair test. He is the friend and confidant of all the old-timers of the lower Mainland, and so has unique access to sources of original information. His talk was very interesting and inspiring, and we are grateful to him for it.

The election of officers then took place, following the reading of reports by the Chairmen of various Committees. These are published in this number of the BULLETIN.

* * * *

We welcome our new officers to their positions of authority. Our new President, Dr. J. Russ Neilson, is well known to all of us, and a very popular choice. He is one of the younger generation, yet quite mature and experienced enough for his position. He is energetic and positive in his outlook, possesses marked ability in his work, and has a fund of commonsense and wisdom which will serve him well. We are very glad to welcome his as President. To all the other members of the Executive, we extend our congratulations.

* * * *

Two matters of business were brought up, one by Dr. J. R. Neilson, who spoke of a proposed memorial to Dr. Joe Bilodeau, our dear old friend now departed. This matter is still in the stages of development—but the suggestion was most enthusiastically received: and immediate steps are to be taken.

Dr. G. F. Strong brought up the matter of narcotic prescriptions, and we feel that there is a great deal in what he said—that the present excessively rigid regulations are working hardship in many cases, and are far more drastic than is necessary. We agree with Dr. Strong that some measure of elasticity should be introduced, always consistent with the utmost effort to avoid abuse.

* * * *

There was one very sad note in the meeting of last night. This was the resignation of Dr. W. Thomas Lockhart as Honorary Treasurer. We are not speaking lightly nor in any formal way, when we say that this is a very serious loss to the Vancouver Medical Association. Dr. Lockhart has been easily the best treasurer we have ever had, and one of the most valuable members that has ever been on our nominal roll. He has given unstintingly and with unselfish devotion, of his time and energy for many years. His reports each year have been models of sanity and wise administration: his counsels have always been productive of good: and his excellent gift of humour has made the manner of their presentation wholly delightful. But the real value of these reports has been in the thought and constructive work which has been put into them—so that from them we received a guidance and help in the management of our affairs that were invaluable.

We have known Dr. Lockhart for many years—have even played golf with him (and there is no greater test of a man's quality)—and we have all grown to be very fond of him, and to look to him for advice and counsel. We shall miss him very greatly as Treasurer—but we hope sincerely that some way may be found to retain him as a sort of emeritus advisor. We feel that he deserves from us everything we can give him: a Life Membership to begin with, for instance. If any man ever earned it, he did: even though he would probably be the first to deny this: and the only one.

He has, too, earned a respite—for this work he did for us took a lot of time, and entailed a lot of work. We must all of us feel intensely grateful to him for his services: and thank him most sincerely for all he has done for us.

Our attention has been drawn to the recent report (1941) of the British Empire Cancer Campaign, published in London, S.W.1.

Looking at this massive volume, in its neutral grey cover, and reading its contents, with long nominal rolls of patrons, governors, members of Grand Council and what not, one would never think there was a war on, much less that this war's greatest intensity is centred round the very London where these imperturbable British workers and research-men and committeemen and Grand Council pursue the even tenor of their way, and do their work and research and produce their report. It takes, evidently, more than anything Hitler can do to disturb the placid "sangfroid habituel" of the British scientific worker.

They are a marvellous race, and we cannot but wonder at them and admire them, and hope that if and when the battle and the stress come our way, we shall be able to do half as well. It is a wonderfully wholesome quality they have, of going on with the work at hand, and not allowing themselves to be turned aside or stampeded or distracted unnecessarily from their daily routine and way of life. It is an "outward and visible sign of an inward and spiritual grace" and power that has always been a notable Anglo-Saxon characteristic. There is no bravado about it, and no hysteria—merely a truly realistic attitude towards life. And after all, it is really a very sensible attitude, and produces excellent results—even if it is a bit difficult for our enemies to understand.

One sees, arriving month by month, the copies of the *Lancet*, the *British Medical Journal*, the *Practitioner*, and so on: and though they are smaller and thinner, and the contents have a more military flavour, yet the spirit is the same, and the determination unchanged, to do with all their might the work that has to be done: and to change as little as possible, and not till change is unavoidable, the way of doing it. All honour to our British brethren, and long may they flourish. After all, these are the qualities of mind and heart and soul that really matter, and that will endure and produce fruit and advance the cause of humanity. As long as they last, there is no fear for humanity; if they were to perish, life on this planet would no longer be worth the living.

NEWS AND NOTES

The Annual Meeting of the College of Physicians and Surgeons was held on Monday, May 4th.

Those present included: Dr. Wallace Wilson, the President, Dr. H. H. Milburn, both representing Medical District No. 3; Dr. W. A. Clarke, Vice-President, representing Medical District No. 2; Dr. F. M. Auld of Nelson, representing Medical District No. 5, which comprises the East and West Kootenay; Drs. Thomas McPherson and F. M. Bryant of Victoria, representing Medical District No. 1, which extends to Atlin, the most northerly point. Dr. A. J. MacLachlan, Registrar, and Dr. M. W. Thomas, Executive Secretary, were present.

The election of officers for this year resulted as follows:

Dr. W. A. Clarke, President.
Dr. F. M. Bryant, Vice-President.
Dr. H. H. Milburn, Treasurer.

The Executive Committee to be formed of: Drs. Thomas McPherson, F. M. Bryant, Wallace Wilson, H. H. Milburn and W. A. Clarke, who will be the Chairman.

* * * *

Dr. T. D. Bain, who has been Chief Medical Officer at Shaughnessy Military Hospital, has been transferred to Christie Street Hospital in Toronto.

Lieut.-Col. H. A. DesBrisay, R.C.A.M.C., has returned to Vancouver. Colonel DesBrisay has had many months of service in Great Britain and until recently was Commanding Officer with No. 9 Field Ambulance. Latterly he served as Chief of Medicine at No. 1 General Hospital, and in addition to this appointment he served as consultant to a large area where it was his duty to visit about 100 hospitals in that large district.

* * * *

Dr. and Mrs. Frank A. Turnbull are receiving congratulations on the birth of a daughter.

* * * *

Flying Officer H. C. Cooper, R.C.A.F., Medical Corps, and Miss Helen Patricia Legge of New Westminster, were married in April. Flying Officer Cooper was an interne at St. Paul's Hospital.

* * * *

Congratulations to Lieutenant M. L. Allan, R.C.A.M.C., upon the occasion of his marriage in April.

* * * *

Lieut.-Col. S. G. Baldwin is now in Great Britain.

* * * *

W are informed that Capt. G. D. Oliver is serving with No. 9 Field Ambulance somewhere overseas.

* * * *

Capt. C. H. Beever-Potts, formerly at Lake Cowichan, is now serving with No. 16 General Hospital.

* * * *

Flying Officer Hymie Cantor, R.C.A.F., is associated with Flight-Lieutenant Neil Stewart at Western Air Command, Vancouver quarters.

* * * *

Capt. N. C. Cook, formerly doing ear, nose and throat in Victoria, is now stationed at Esquimalt Military Hospital.

* * * *

The following officers have received promotion in the R.C.A.M.C.: Major A. L. Cornish, Major F. E. Coy, Major J. D. Hunter.

* * * *

Capt. E. J. Curtis, who has done much outstanding work in the field of infectious diseases, is busily engaged in the R.C.A.M.C.

* * * *

Squadron-Leader L. G. C. d'Easum is now at Regina.

* * * *

Flying-Officer G. R. F. Elliot, who has been stationed at Williams Head Quarantine Station in Victoria as medical officer with the Department of Pensions and National Health, is now serving with the R.C.A.F. Medical Corps.

* * * *

Dr. G. L. Sparks, formerly at White Rock, is now stationed at Williams Head Quarantine Station.

* * * *

Replies from the Health Insurance Questionnaire were received from Capt. G. C. Johnston and Capt. T. K. McLean, who are serving with No. 13 Light Field Ambulance in Great Britain. Lieut.-Col. C. A. Watson, formerly of Victoria, is the Officer Commanding No. 13 Field Ambulance.

* * * *

Squadron-Leader W. N. Kemp, when last heard of, was stationed at St. Thomas, Ont.

* * * *

Former internes of the Vancouver General Hospital, Drs. J. A. McCaffrey, R. B. Rowed and A. M. Johnson are now serving with the R.C.A.M.C.

Capt. O. C. Lucas, formerly of Victoria, is now serving with the R.C.A.M.C.

* * * *

Capt. R. P. McCaffrey, R.C.A.M.C., is stationed at Vernon.

* * * *

Capt. J. M. McDiarmid, R.C.A.M.C., formerly of New Westminster, is serving with No. 16 General Hospital.

* * * *

Recent promotions in the R.C.A.M.C. include Lieut.-Colonel R. L. Miller with headquarters M.D. No. 11.

* * * *

Surgeon-Lieutenant R. D. Miller, formerly in practice in Vancouver, is now stationed at Esquimalt Naval Hospital.

* * * *

The last word of Lieut.-Colonel W. E. M. Mitchell, formerly of Victoria, finds him in Malta. He has our sincere good wishes.

* * * *

Capt. R. H. L. O'Callaghan, recently of Ganges, Salt Spring Island, and formerly of Calgary, is serving with the R.C.A.M.C. at Esquimalt Military Hospital.

* * * *

When last heard of Surgeon-Lieutenant-Commander W. M. Paton was at St. John, Newfoundland, and Major G. C. Large is stationed in a Nova Scotia hospital.

* * * *

Flying Officer D. B. Ryall, formerly of Alert Bay, is serving with the Air Force.

* * * *

Capt. F. H. Stringer has returned from overseas, and is looking very fit.

* * * *

Major J. E. Walker has been in Vancouver on leave and is looking well.

* * * *

Capt. W. R. Walker, formerly at Penticton, is now stationed at Vernon.

* * * *

Dr. T. A. Briggs of Courtenay, President of the Upper Island Medical Association, called at the office to arrange for the Spring Meeting of that Association, which will probably be held on May 27th at Qualicum.

* * * *

Dr. C. W. Mewhort is now at Lake Cowichan in association with Drs. Watson and McHaffie of Duncan.

* * * *

Dr. Stuart Daly of Trail has just returned from a meeting of the American College of Physicians held in St. Paul. En route home he visited in Winnipeg. Mrs. Daly accompanied him.

* * * *

We are glad to report that Dr. W. A. Coghlin of Trail is back at the office and apparently rapidly recovering from a recent operation.

* * * *

Drs. M. R. Basted, D. J. M. Crawford and William Leonard of Trail and Drs. R. B. Shaw and Wilfrid Laishley of Nelson attended the Eighth Annual Meeting of the Spokane Surgical Society in April.

* * * *

Dr. and Mrs. T. J. Sullivan of Cranbrook are receiving congratulations on the birth of a daughter, on April 22nd.

* * * *

The profession in the West Kootenay extend sympathy to Dr. W. H. Ormond of Salmo in the loss of his mother.

* * * *

Dr. W. J. Endicott of Trail is having a well-earned holiday.

* * * *

Dr. H. H. Milburn flew East last month to attend the 100th celebration of his mother's birthday. All members of the family foregathered for this outstanding event, which, all will agree, was something worth celebrating.

Dr. H. Ostry, now associated with Dr. Irving of Kamloops, has been doing post-graduate work in Chicago.

* * * *

The officers of No. 13 Reserve Field Ambulance, R.C.A.M.C., comprise a number of medical practitioners in Victoria: Officer Commanding, Capt. A. B. Nash; Next Senior Officer, Lieut. W. H. Moore; Acting Adjutant, Lieut. G. B. B. Buffam; other officers: Lieuts. R. C. Newby, A. Herstein, L. W. Cromwell, W. A. Trenholm, V. W. Smith and V L. Annett.

* * * *

Dr. David Berman of Victoria has been suffering from a painful ankle which he twisted when he slipped on a piscatorial party.

* * * *

Captains O. C. Lucas, D. B. Roxburgh, N. C. Cook and L. L. Ptak, all formerly of Victoria, has just returned from R.C.A.M.C. instruction course in Eastern Canada.

* * * *

Dr. R. A. Hunter of Victoria made a hurried trip to Winnipeg to see his mother, who is seriously ill.

* * * *

Dr. Hugo Emanuele, formerly of Pioneer, is now associated with Dr. H. McGregor in Penticton. Dr. Emanuele will take the place of Dr. McGregor's son, Flight-Lieut. McGregor, who is serving with the Air Force.

* * * *

Capt. W. H. White, formerly of Penticton, visited his home en route to Vernon, where he is now stationed.

LIBRARY NOTES

RECENT ACCESSIONS TO LIBRARY:

Transactions of the American Proctological Society, 1941.
Transactions of the American Ophthalmological Society, 1941.
Transactions of the 47th Annual Meeting of the American Laryngological, Rhinological and Otological Society, Inc.
Medical Clinics of North America, Symposium on Medical Emergencies and Tuberculosis, St. Louis Number, March, 1942.
Physical Medicine, 1941, by Frank H. Krusen.
The Management of Obstetric Difficulties, 2nd ed., 1941, by Paul Titus.

MISSING

Will members please check this list carefully and return to the Library any of the books and journals listed below which may be in their possession:—

American Journal of Medical Sciences, January, 1942.
American Journal of Surgery, January, 1942.
Archives of Surgery, January, 1942.
British Medical Journal, July 12th, 1941.
Canadian Medical Journal, February, 1942.
Endocrinology, May and July, 1940.
Post Graduate Medical Journal, December, 1940.
Practitioner, January, 1941.
Quarterly Journal of Medicine,, October, 1941.
Surgery, Gynæcology & Obstetrics, v. 73, 1941.
"Behind the Mask of Medicine," by Miles Atkinson.
"New Electrocardiography," Graybiel and White.

Vancouver Medical Association

ANNUAL REPORTS FOR 1941-1942

REPORT OF THE HONORARY SECRETARY

Meetings.—Seven General Meetings of the Associations were held during the year, at which a number of excellent and very interesting papers were presented. It is regretted that the Osler Lecture was not given, owing to the illness of Dr. D. E. H. Cleveland, the appointed lecturer. A special luncheon was arranged in December, at which Surgeon Rear-Admiral Gordon-Taylor was guest speaker.

Fourteen meetings of the Executive Committee were held, one in conjunction with a special committee from the Metropolitan Health Board, for the purpose of making plans for the organization of the medical profession in case of a military emergency.

Membership.—The total membership of the Association, including applications for membership which are pending, is 311. This is made up as follows:

Life Members	10
Active Members	251
Associate Members	43
Privileged Members	7

Ten new members were elected through the year and Life Membership was bestowed upon Dr. Dallas Perry.

Forty-five members of the Association are on active military service.

The Association has lost four members since the last Annual Meeting, namely:

Dr. P. W. Barker; Dr. D. J. Bell, Life Member; Dr. E. H. Bolton, Dr. G. W. Knipe.

There were three resignations from the Executive Committee during the season, because of pending active service, which necessitated the appointment of new officers to the Executive to fill the vacant positions.

Attendance.—The average attendance at meetings was 49, being a considerable decrease as compared with the previous year. This drop in attendance may be explained in part by the absence of members on active service, and also by the fact that no dinner meeting was held last year.

It is the hope of the Executive that the attendance may be increased in the year to come, since it is felt that the quality of the papers presented warranted a larger audience.

Respectfully submitted,

A. E. Trites, *Honorary Secretary.*

* * * *

HONORARY TREASURER'S REPORT

Mr. President and Members:

I present the Auditor's Report for the fiscal year ending March 31, 1942.

The various trust funds have been well maintained.

Trust Funds: *The Historical and Ultra Scientific fund* shows a savings account from interest of $17.49, having been drawn on by the Library Board for $125.00. *The Stephen Memorial Fund,* drawn on for $90.00, shows a balance in savings account of $5.48. *The Sickness and Benevolent Fund* savings account, $274.02, paid in grants in aid of members during the year $350.00. *Benevolent Endowment Fund,* $700. *The John Mawer Pearson Fund* savings account, $291.99, in addition to the principal of fund, $3018.75.

General Fund Bonds: The investments of the General Fund apart from current account and savings account show a present value of $9350.00. $3,017.00 of this prop-

erly belongs to the Summer School, for during the year the current bank account and savings accounts were invested in War Loan by the Trustees to the fullest extent consistent with maintaining sufficient liquid cash.

LIBRARY: The Library has been well maintained, the committee having expended in all $1360.00, which includes the $215.00 from the special funds. Unfortunately the problem of increased room urgently required for library purposes is still unsolved.

INCOME: The statement of income and expenditure for the year shows:

Income from members' annual dues	$4,314.50
Interest on invested funds	217.76
Total	$4,532.26

In addition there accrues the compensation derived from the Relief Committee of $600.00 and a small credit balance from BULETIN, $4.66.

EXPENDITURE:

The expenditure for salaries	$2,782.97
The expenditure for rent	1,377.00
Total	$4,159.97
Received from C. P. S. of B. C., their share	1,860.00
	$2,299.97
Other running expenses	719.86
Total expenditure apart from Library maintenance	$3,019.83
Expended from General Fund by Library Committee	1,145.00
Total	$4,164.83
Balance of income over expenditure	$ 368.00

MEMBERS: Of 251 active members still on the roll 41 have volunteered for service, leaving 210, of whom some four or five have resigned or been struck off. Four Associate Members of 43 have volunteered, leaving 39 liable for dues.

FORECAST: Our gross income for the present year should be in the neighbourhood of $4500.00, which would provide a library fund equal to that expended last year, or about $1200.00, allowing a small margin further enlistments in the army.

STATEMENTS: The statements already sent out include the $1.00 assessment for the Sickness and Benevolent Fund the same as last year.

It would be appreciated if members would send in their cheques promptly and did not deduct this mdest dollar when drawing the cheque.

All of which is respectfully submitted.

W. T. LOCKHART, *Hon. Treasurer.*

* * * *

EDITOR'S REPORT

The history of the BULLETIN for the past twelve months has been one of progress: not rapid or sensational in any way, but definite, though in a small degree.

The circulation has been increased from 1000 to 1100 copies monthly. We receive many requests to be put on mailing lists, from many parts of the continent: even from South America. How it happens that within a month after the publication of a certain article, a request comes from a small town in Pennsylvania for a reprint of this article, is hard to understand—but we feel flattered all the same.

The actual number of pages printed has increased considerably. We have published, in twelve issues, the actual equivalent of thirteen complete BULLETINS. We are finding it hard, in fact, to squeeze in all the material that we want to publish. If some of our contributors, therefore, find that their contribution is delayed, we can only ask for their

indulgence and assure them we shall do our best for them: and that we are very grateful to them for their efforts.

Our advertising has increased during the year, and we now have a much more stable list of advertisers.

As regards our balance sheet, the Auditors say that we show a small profit of some four or five dollars. We regret that we have not done better—but feel sure that the Association will be satisfied that our profits should go into larger issues and increased circulation. In this connection, it must be remembered that these increases in number and size mean a large increase in postage: and this cuts heavily into our income.

We owe a great deal to our various Sections. The Vancouver General Hospital has been particularly good. Its articles arrive regularly, are well edited and written, and contain excellent material. Some of them are of especial value, but all are good. Miss Ross of the V. G. H. Staff has been most helpful in this regard.

St. Paul's has also given us several excellent contributions. The Victoria Medical Society sends articles and papers which are of excellent quality, and we value them greatly. Our Cancer Section has also been well taken care of.

Lastly, the B. C. Medical Association Section has been a tower of strength to us. The regular contribution of news and notes, the aid in distribution, and so on, have meant a great deal to us, and we again thank Dr. M. W. Thomas and his staff for their most valuable help.

Our publishers have always been most patient and loyal, and this really means Mr. W. E. G. Macdonald, our business agent. Working with him has been a great pleasure, and I do not see, personally, how we could have got on without him. The improvements in our status, economically at least, are entirely due to him.

Reported on behalf of the Publications Committee.

J. H. MacDermot.

* * * *

REPORT OF TRUSTEES

The President, Vancouver Medical Association:

Herewith a report of the Trustees and Sickness and Benevolent Fund Committee for the fiscal year ending March 31st, 1942. During the year there were sundry meetings of the Trustees and also of the Sickness and Benevolent Fund Committee.

The sum of four hundred and fifty dollars ($450.00) was expended from the Sickness and Benevolent Fund. This expenditure was in the nature of a gift and it is not expected that it will ever be returned.

Four thousand dollars ($4000.00) was invested in War Bonds during the year, of which amount $3500.00 was in the General Fund and $500 in the Ultra-Scientific Fund.

The Trustees note with satisfaction that a small levy has been made in the past year in behalf of the Suckness and Benevolent Fund. It is to be hoped that demands on this fund will be curtailed in order that the new assessment may build up the capital structure which at present is much too small.

All of which is respectfully submitted.

Signed on behalf of the Trustees.

Frederic Brodie.

* * * *

ANNUAL REPORT OF LIBRARY COMMITTEE

Books Added to Library:

General Collection:

39	new books at a cost of	$ 349.79
9	gifts.	
5	gifts, Nicholson Collection, at a cost of	17.43
	Total—53 Books added, at a cost of	$ 332.36

Nicholson Fund:		
5 books purchased at a cost of $17.43, leaving a balance on hand of		99.91
Medical Journals:		
71 Journals subscribed to at a cost of		690.47
43 Journals are received as gifts.		
114 Journals are received in Library.		
102 volumes bound at a cost of		267.70
Other Expenses		
Subscription to Medical Library Association	$ 16.83	
Special Labels for reduced mailing rate	3.78	
Sundry Expenses	32.29	
		52.90
Total		$1,360.86
Credit—By withdrawal from Ultra-Scientific Fund	$125.00	
Stephen Memorial Fund	90.00	215.00*
		$1,145.86

*The $215.00 credited by withdrawal from the two special funds mentioned was applied to the subscription and binding costs of certain journals which were considered properly to fall within the classifications for which these funds were intended.

During the past year one evening and nine luncheon meetings of the Library Committee were held.

Several books on Industrial Medicine have been purchased and the librarian has prepared a bibliography on the subject which is now in the Library and which will enhance the usefulness of this section.

The Post Office Department has granted our request for a special reduced postal rate for mailing books from the Library going on loan to associate members resident in the Province.

After investigation into the frequency with which these various journals in the Library are used, it has been decided in the interests of economy to discontinue the following six journals:

Endocrinology	Journal of Infcetious Diseases
Journal of Anatomy	Physiological Reviews
Journal of Immunology	Science.

Through the Library the Association has become a subscriber to the microfilm service of the Friends of the Army Medical Library at Washington, D.C. This service and its advantages were described in a recent number of the BULLETIN. Fortunately it became possible to purchase locally an illuminated microfilm projector of American manufacture, at a price believed to be considerably less than it would have cost to import it under present conditions. This apparatus, which is in excellent order, not only makes it possible for the individual user to read microfilm at east and in comfort, but can also be used satisfactorily to project diagrams, etc., on a screen such as we use in the Auditorium.

We desire to acknowledge with thanks the gift of $10.00 from Dr. C. A. Eggert, and books from Dr. G. H. Clement, Dr. S. G. Elliott, the Division of Venereal Disease Control, and others.

All of which is respectfully submitted,

D. E. H. CLEVELAND, *Chairman.*

* * * *

REPORT OF THE RELIEF ADMINISTRATION COMMITTEE

Presenting the 9th annual report of the Relief Administration Committee.

During the past year there has been a decrease in the number of people on relief and, consequently, a decrease in the amount of work for medical relief. The gross amount of

accounts for the year ending March 31st, 1941, amounted to $128,293.00, while those for the year ending March 31st, 1942, amounted to $74,897.00. Percentages paid during the past twelve months have ranged from 38% in September last to 45% in April and May, an average of 41.579%.

The total of net accounts for the year was $59,590.34
The total amount paid to doctors 24,957.25

Dr. L. W. MacNutt, who has been a member of the Relief Administration Committee for several years, found it necessary to resign and Dr. Gordon Burke kindly consented to act as a member of the Committee, which now consists of:

Dr. W. T. Lockhart, Chairman; Dr. J. A. Sutherland, Secretary; Dr. Colin McDiarmid, Dr. D. F. Busteed, Dr. Gordon Burke, Dr. J. R. Davies, Dr. A. O. Brown

All of which is respectfully submitted.

J. A. SUTHERLAND, M.D., *Secretary.*

* * * *

CLINICAL SECTION—ANNUAL REPORT

Five meetings of the Clinical Section were held during the year—three at St. Paul's Hospital, one at Shaughnessy and one at the Vancouver General.

Owing to "blackout" regulations, two meetings were cancelled, which somewhat curtailed the activities of this Section.

Respectfully submitted.

J. R. DAVIDSON, *Chairman.*

* * * *

REPORT OF PÆDIATRIC SECTION

Since the last annual meeting of this Society the Pædiatric Section has held seven meetings. Attendance at these meetings was very good.

During the year we have been hosts to the North Pacific Pædiatric Society, holding a very entertaining meeting in Vancouver last June.

During the winter we made a short study of nervous diseases in children, including a visit to the Provincial Hospital for the Insane in New Westminster.

We have lost to the Army one of our foremost members, Dr. E. J. Curtis.

Respectfully submitted,

J. H. B. GRANT, *Secretary.*

* * * *

REPORT OF EYE, EAR, NOSE AND THROAT SECTION

The Eye, Ear, Nose and Throat Section of the Vancouver Medical Association held three luncheon meetings and three clinical meetings during the course of the past year.

This section met less frequently this year owing to the increasing demands on the time of our members in connection with A.R.P. work in the hospitals and with the greater burden of public practice.

We have lost two more members of this section to the Armed Forces. We look forward to the day when we can again all meet as one, and to the early return of all those members who are now on active service.

A. R. ANTHONY, *Chairman.*

* * * *

REPORT OF HISTORICAL COMMITTEE

Much groundwork requires to be done in compiling a history of the Vancouver Medical Association before any tangible results can be shown.

During the year work has been continued in the synopsizing of the minute books of the Association. The completion of this, up to the present date, seems to me to be the first essential in task in getting together historical data.

G. E. KIDD, *Chairman.*

REPORT OF V. O. N. ADVISORY COMMITTEE

There is nothing to report, as it has not been necessary to call a meeting of this committee throughout the year.

L. W. MacNutt, *Chairman.*

* * * *

REPORT OF GREATER VANCOUVER HEALTH LEAGUE REPRESENTATIVES

As one of your representatives on the Board of Directors of the Health League of Greater Vancouver I wish to submit the following report:

I have attended over half of their meetings and taken part in their discussions regarding:

1. Compulsory pasteurization of milk.
2. Control of the city rat menace.
3. Nutrition.

I was received with hospitality and enjoyed my participation in their business.

R. A. Wilson.

* * * *

REPORT OF REPRESENTATIVE TO B. C. MEDICAL ASSOCIATION

I report that I have attended all meetings of the Board of Directors of the B. C. Medical Association. No special matters to report, as all matters have been reported in the Bulletin.

D. F. Busteed.

CANADIAN MEDICAL ASSOCIATION
SEVENTY-THIRD ANNUAL MEETING
JASPER PARK LODGE
June 15th-19th, 1942

* * * *

BRITISH COLUMBIA MEDICAL ASSOCIATION

Canadian Medical Association, British Columbia Division.

A Message from the President of the British Columbia Medical Association

A definite need for our annual meeting has been demonstrated in the past by the increasing enthusiasm of those taking part. Our attendance shows a gratifying yearly increase.

A general stimulus to the whole profession has resulted from the excellence of the programmes arranged for the benefit of those desirous of improving their knowledge and service to humanity.

I believe that this year we have a great opportunity to get a real measure of fellowship injected into our gatherings. This is the hour when we must build solidly and soundly: first, our faith in each other; secondly, our faith in the efficacy of our healing.

Come to Jasper—every one who can be spared. Come and have a real week of enjoyment—come in numbers large enough to give our Alberta colleagues a real boost and genuine encouragement. Remember their problems are similar to ours and we have much to learn of them.

Welcome to Jasper.

Cecil H. Hankinson.

British Columbia Medical Association

(CANADIAN MEDICAL ASSOCIATION, BRITISH COLUMBIA DIVISION)

President	Dr. C. H. Hankinson, Prince Rupert
First Vice-President	Dr. A. H. Spohn, Vancouver
Second Vice-President	Dr. P. A. C. Cousland, Victoria
Honorary Secretary-Treasurer	Dr. A. Y. McNair, Vancouver
Immediate Past President	Dr. Murray Blair, Vancouver
Executive Secretary	Dr. M. W. Thomas, Vancouver

ANNUAL BUSINESS MEETING

Jasper, June 16th, 1942

8:00 p.m.—Annual Meeting of the College of Physicians and Surgeons.
(All doctors should attend.)

Followed by:

Annual Meeting of the British Columbia Medical Association.

Those travelling to Jasper from the Coast should plan to leave Vancouver on Monday evening, June 15th, arriving as Jasper at noon on Tuesday, June 16th.

Members of General Council, C.M.A., should arrive on Sunday. Sessions of General Council commence early Monday morning.

Golf on Tuesday afternoon.

Annual Meetings on Tuesday evening.

Lecture Programme begins on Wednesday morning.

Be sure to bring golf clubs and enter the competition for the Trophy of the British Columbia Medical Association.

Dr. C. E. Davies is the present holder of the Trophy, which he wrested from Dr. H. H. MacKenzie in 1941.

Buy a ticket from the Canadian National and reserve accommodations on the train and at Jasper Lodge.

Accommodation on Train: (War tax has been included)

Vancouver to Jasper (each way)

Lower Standard Berth	$ 5.80
Compartment for one passenger	$14.85
Compartment for two passengers	$16.50
Drawing Room for one passenger	$17.60
Drawing Room for two or more passengers	$20.90

Canadian National Offices accept reservations for Jasper Lodge.

SUMMER SCHOOL

Owing to the fact that the Canadian Medical Association and the British Columbia Medical Association are holding their Annual Meetings at Jasper in June, the annual Summer School will be held September 15th to 18th, inclusive, at the Hotel Vancouver.

College of Physicians and Surgeons

President ..... Dr. W. A. Clarke, New Westminster
Vice-President ..... Dr. F. M. Bryant, Victoria
Treasurer ..... Dr. H. H. Milburn, Vancouver
Members of Council—Dr. F. M. Auld, Nelson (District No. 5); Dr. F. M. Bryant, Victoria (District No. 1); Dr. W. A. Clarke, New Westminster (District No. 2); Dr. Thomas McPherson, Victoria (District No. 1); Dr. H. H. Milburn, Vancouver (District No. 3); Dr. Osborne Morris, Vernon (District No. 4); Dr. Wallace Wilson, Vancouver (District No. 3).
Registrar ..... Dr. A. J. McLachlan, Vancouver
Executive Secretary ..... Dr. M. W. Thomas, Vancouver

MEDICAL ECONOMICS

The loss of time in industry due to disabling sickness is becoming a live topic, especially with the scarcity of manpower and the necessity of measures to conserve the health of workers and keep them on the job. It has always been recognized that the control of disease in its incipient stages, advice on diet, rest, exercise, and so on, provide an extensive field for the doctor in co-operation with industry. The magnitude of this problem is perhaps better illustrated in the following table, which indicates as well the lines of demarcation of medical practice as they exist today. Now more than ever employers are finding it necessary to guard the health of their employees. The pressure of war demands has demonstrated the need to study actively the introduction into their plants of some such plan as the M-S-A.

MEDICAL SERVICES FOR EMPLOYEES

Division	*Function*	*Agency*	*Comparison of Production Time Lost*
PUBLIC HEALTH	Sanitation. Food Inspection, etc. Care T.B., V.D. and Mental Diseases — Employee may use own doctor at his expense.	Health Officers	No Estimate.
OCCUPATIONAL ACCIDENTS AND DISEASES	Medical Aid including complete care for all such injuries or compensatory diseases.	Employee's own doctor—Workmen's Compensation Board	ONE worker out of every 100 will be disabled by occupational injury.* ONE worker out of every 3000 will be disabled by occupational illness.*
INDUSTRIAL MEDICINE	Safeguarding places of work. Pre-employment examinations. Periodic examinations. Proper placement of workers.	Doctor remunerated by employer —by arrangement	Allows reduction of production time lost and placement of handicapped workers.
NON-OCCUPATIONAL ACCIDENTS AND DISEASES	All ordinary medical care including diagnosis T.B., V.D., and Mental Diseases, home, office and hospital visits; consultations; X-ray and diagnostic aids; specialists' services; surgery or operations.	Employee's own doctor—M.S.A.	Personal sickness will disable ONE worker out of every 10—and the average amount of time lost in each case will be *40* days.* ONE worker out of every 50 will be disabled by non-occupational injury.*

* Dr. C. D. Selby, Medical Consultant to General Motors Corporation.

Vancouver General Hospital

CLEAR SPINAL FLUID IN MENINGOCOCCIC MENINGITIS

Case Report

R. A. Palmer, Capt., R.C.A.M.C., and F. D. Sinclair, M.D.

The purpose of this paper is to report a somewhat confusing clinical experience with a case of meningococcic meningitis in which the initial lumbar puncture revealed a clear spinal fluid and a cell count of 16 cells. In his series of 50 cases of epidemic meningococcus meningitis, Curtis[1,2] refers to this cases, and reports two others in which the initial spinal fluid cell count was under 100.

Case Report:

A robust schoolboy of 16 years suffered a mild "flu" October 10th, 1941, lasting five days, but was then well till October 23rd, 1941, when he developed malaise, chills, headache and sore throat, taking to bed. Vomiting began in about eight hours, in twelve hours a generalized spotted rash appeared and his temperature was 103°, though his headache was better. General muscle aches became prominent and photophobia was present. He was seen by Dr. F. D. Sinclair, who admitted him to the Vancouver General Hospital, October 24th, 1941. Family history and past history are insignificant, though a carious tooth without gross infection was extracted October 21st, 1941.

Examination (2 hours after onset)—A fair-haired, slender but well developed boy of 16 years; looks ill and toxic, some photophobia is present, and he does not like to move due to general muscle aches. Temperature 99° and considerable hoarseness but the throat is unremarkable. There is a generalized fine purpuric rash, with some petechiæ in the conjunctiva and soft palate, but none in the fundi. One tooth recently extracted, but no gross infection is obvious. A few small post cervical glands are palpable. Heart rate is 120, regular, B.P. 110/50; otherwise the chest, abdomen, genitalia are negative.

Deep and superficial reflexes are normal, there is no definite stiffness of the neck, but a well marked Kernig is present bilaterally.

Urinalysis—1020 albumin 2 plus, W.B.C. 2 plus, hyaline casts 2 plus.

Blood count—R.B.C. 4,410,000, W.B.C. 33,800, hæmoglobin 89%. (S) Diff count: polys 44, staff (young polys) 44, lymphs 3, mon. 1, disint. 8.

Clotting time—4½ minutes.

Hess capillary test—negative.

Spinal puncture (23 hours after onset)—Clear fluid. Pressure 200 mm. of spinal fluid. Cell count: 15 (60% polys, 40% lymphs). No organisms found. Protein 28 mgm. %.

Blood culture—Subsequently reported, no growth.

Initial Impression—A fulminating septicæmia of undetermined ætiology. Blood dyscrasia not finally excluded.

Clinical course—4 grams of sulphadiazine were given by mouth, with 2 grams repeated in 2 hours, but absorption was uncertain due to vomiting, and it became apparent that parenteral administration would be required. In the first seven hours of admission the patient was obviously failing, becoming stuporose though apparently perceiving light. He was restless and breathing tended to be of the Biot periodic type. Stiffness of the neck was still only questionable, but the Kernigs were definite as before. Tmperature had risen to 102°. Dr. G. F. Strong was asked to see the patient, and concurred in the general findings. Intravenous sulphathiazole 2 grams were given and repeated every four hours. A blood transfusion of 250 cc. was given and repeated in 24 hours. Parenteral fluids were given. In another seven hours (14 hours after admission) the patient was

conscious and talking rationally, and his clinical course thereafter was uneventful. Eighteen hours after admission the lumbar puncture was repeated (40 hours after onset). This revealed a cloudy fluid under pressure of 35 mm. of Hg., with a cell count of 14,500 and Gram negative intracellular diplococci resembling meningococci. This appeared to establish the diagnosis. The sulphathiazole was continued, changing in a few days to the oral route with a gradual reduction in dosage, a total of 76 grams being given. Sixty cc. of anti-meningococcic serum in divided doses were given, but the value of this seems questionable. Sulphathiazole concentration in the blood was 7.3 mgm.% on October 26th, and on October 29th it was 4.9 mgm.%, at which time the spinal fluid concentration was 1.0 mgm.%. Spinal fluid, blood and general clinical findings rapidly returned to normal, and the patient returned home November 7th, fifteen days after the onset of the disease.

An unusual complication in this case is the fact that the professional blood donor was found to be syphilitic, apparently an early infection, as the routine blood Kahn three months previously was negative. This blood must be presumed to be highly infectious, but it is hoped that the high dosage of sulphathiazole would assist the natural immunity of the recipient to prevent transfer of the disease. At the present time our patient retains a negative blood Kahn but is being rechecked periodically and the outcome of this aspect will be reported on subsequently.

In Cecil's Textbook of Medicine[1], Herrick points out that meningococcic meningitis usually proceeds through three stages:

1. Carrier—with meningococci in the nasopharynx.
2. Generalized invasion—meningococcæmia, organisms in the blood stream without localization in the meninges or other sites. Clear spinal fluid and normal fluid cell count.
3. Metastatic stage—localization in some body site, usually in the meninges.

These stages vary considerably in duration and intensity and frequently it is not possible to distinguish them clinically. Murray[5] summarizes the disease in these words: "It would seen that the sensitiveness to injury of the C.N.S. has caused a metastatic localization so to overshadow a true condition that the disease is often regarded as a primary meningitis, whereas in reality it is a pharyngitis with occasionally a generalization in the form of a septicæmia, which, in turn, is usually complicated by localization in the meninges and occasionally in the skin, and much more rarely in serous cavities, joints, endocardium and other sites." He refers to the records of six cases in which the meningitis was a late development in meningococcal septicæmia. The careful study of twenty-six cases by Tillett and Brown[6] affords significant clinical evidence of the pathogenesis of the disease; it is of interest that in one case meningococci were cultured from spinal fluid that was otherwise normal, and in another case there was evidence of a mild generalized meningococcic infection for two months before development of meningitis. Nichols[8] reports a case with meningococcic septicæmia for fourteen weeks before the development of meningitis. Recent papers[10, 13] record cases with normal cell counts in the first examination of the spinal fluid, and in another reported case[11] there was a clear spinal fluid throughout the whole course of the disease. It seems established that in the stage of generalized invasion (meningococcæmia) the spinal fluid is not a reliable measure of the presence or severity of the disease, and Herrick points out[4] that some undiagnosed cases of overwhelmingly fatal infection associated with purpura are likely to be meningococcic septicæmias. In the Waterhouse-Frederickson syndrome (fulminating meningococcæmia with adrenal hæmorrhage) frequently the spinal fluid is not abnormal[9], the patients dying (12-18 hours) before there has been time for local involvement of the meninges.

When first presenting a problem for diagnosis our case was passing through the stage of meningococcæmia, and illustrates the importance of remembering the established pathogenic sequence of events. This point is still insufficiently stressed in some of the standard texts of medicine, though, as noted above, it has been reported frequently since Herrick emphasized it[2, 3] in 1918. At that time, after an experience with an epidemic

of 208 cases in an army camp[2] he stated that "the diagnosis can be made in at least fifty per cent of cases in the premeningitic stage of sepsis" (meningococcæmia). Often in these cases the meningococcus can be recovered in the spinal fluid "before the characteristic clinical picture develops, or cellular increase and cloudiness occur in the spinal fluid." In doubtful cases he recommends that lumbar puncture be repeated every three to six hours[3]. A variation of this is suggested by Hoyne[13, 14], who takes an immediate blood culture, but in cases with petechiæ delaying lumbar puncture the meningeal signs of clinical examination are clearly present.

Summary:—Report is made of a case of severe meningococcic infection in which the initial lumbar puncture revealed a clear spinal fluid with only sixteen cells. Some similar experiences in the literature are referred to. The importance of remembering that "meningococcic meningitis" is a generalized disease, and that in early cases the spinal fluid may show no inflammatory response, is apparent.

REFERENCES:

1. Herrick, W. W.: Cerebrospinal Fever, Cecil, R. L., Textbook of Medicine, Saunders (W. B.) Company, 1941.
2. Herrick, W. W.: The intravenous serum treatment of Epidemic Cerebrospinal Meningitis. Arch. Int. Med., 21:541, 1918.
3. Herrick, W. W.: Epidemic of Meningitis at Camp Jackson, J.A.M.A., 70:227, 1918
4. Herrick, W. W.: Case of Purpura Fulminans. J.A.M.A., 76:55 (Jan. 1), 1921.
5. Murray, E. G. D.: The Meningococcus. Medical Research Council, Spacial Report Series No. 124, 1929.
6. Tillett, W. S., and Brown, T. M.: Epidemic Meningococcus Meningitis. Johns Hopkins Hospital Bulletin, 57:297, 1935.
7. Craster, C. V., and Simon, H.: Meningococcic Meningitis and Acute Meningococcæmia. J.A.M.A., 110:1069 (April 2), 1938.
8. Nicholls, J. V. V.: An unusual case of Meningococcus Meningitis. Can.M.A.J., 35:161 (August), 1936.
9. Aegerter, E. E.: Waterhouse-Frederickson Syndrome: Review of the Literature and Report of 2 cases. J.A.M.A., 106:1715 (May 16), 1936.
10. Rathery, F., and Bolzinger, R.: Apropos d'un cas de meningite cerebrospinal meningococcique a debut chinique et cyto-bacteriologique atypique. Bull. et mem. Soc. med. des hop. de Paris. 56:553-557, Oct. 29, 1940.
11. Hillemand, P.: Un cas de meningite cerebro-spinal a liquide cephalo-rachidien clair et lymphocytose rachidienne. Bull. et mem. Soc. Med. des Hop. de Paris. 56:712-714, Jan. 6, 1941.
12. Curtis, E. J.: Meningococcus Meningitis. Bull. Van. Med. Assoc., 18:93 (Dec.), 1941.
13. Hoyne, A. L.: Epidemic Meningitis. J.A.M.A., 115:1852-1855 (Nov. 30), 1940.
14. Hoyne, A. L.: Intravenous Treatment of Meningococcic Meningitis with Meningococcus Anti-toxin. J.A.M.A., 107:478 (Aug. 15), 1936.

St. Paul's Hospital

CASE OF URETERAL (BI-LATERAL) OBSTRUCTION WITH COMPLICATIONS FOLLOWING SULFADIAZINE

EARLE R. HALL, M.D.

From reports in the literature during the past few years it is evident that disturbances of the renal tract may occur following therapy by use of any of the "Sulfa" drugs. Recently, at St. Paul's Hospital, we had a case developing severe complications following the administration of sulfadiazine. As this is considered to be one of the safest of the sulphonamides, it is deemed a case worthy of report.

CASE

A. K., male, age 31, was admitted to St. Paul's Hospital on Feb. 22, 1942, with infection involving the right hand. This was the result of a small wound of the hand sustained while at work five days previously. Upon admission to hospital a diagnosis of cellulitis of the hand was made, and in addition to local treatment he was given sulfadiazine gms. II for the initial dose, and then gm. I q.4.h. with soda bicarbonate grs. X. Discharge from the wound in the hand showed Staphylococcus Aureus. On Feb. 27, 1942, the hand had improved, and his temperature was normal. He was discharged from hospital. It is interesting to note that urine which he had passed shortly before leaving hospital microscopically showed R.B.C. 4+.

The day following hospital discharge, patient consulted his physician, complaining of pain at the right lumbar region associated with nausea and vomiting, and also stating that he had passed very little urine since leaving hospital. Catheter was passed and about 2 oz. of blood-stained urine obtained. He was re-admitted to hospital on Feb. 28, 1942. His temperature upon admission was 98.3, pulse 60, and a few hours later he passed 6 oz. or urine in the hospital, this showing gross hæmaturia.

March 1, 1942—He has been passing urine since readmission, but 24-hour output has not exceeded 10 oz.

March 3, 1942—I was called in consultation to see this case, with the above history, and in addition to oliguria since his hospital admission, there has been no urine voided for the past 24 hours.

Examination of the patient showed definite cyanosis—appeared to be very much dehydrated—respirations were very rapid and shallow. Patient is complaining of considerable pain in both lumbar areas. These were also very tender on palpation. Cystoscopy and catheterization of ureters was carried out. This disclosed no urine in the scopy and catheterization of ureters was carried out. This disclosed no urine inthe bladder, which was somewhat inflamed, with considerable œdema involving both ureteral orifices. Catheters would not pass up the ureters—meeting apparent obstruction a few c.c.'s within, this being greatest on the right. Small bougies were finally passed by the obstruction, which appeared to be due to old blood clots and small reddish crystal-like formations which could be seen passing out of the ureteral orifices. Catheters were then passed on both sides to the renal pelvis, and immediately there was a free flow of blood-stained urine from the pelvis of each kidney. The urine appeared to be under great pressure. A few minutes following the free flow of urine through the catheters, the patient felt very much improved—the cyanosis disappeared, his respirations returned to normal, and the pain at the back receded and finally disappeared. The catheters were left in on each side for about half an hour, and the renal pelves were washed out with warm saline.

March 4, 1942—Following cystoscopy and ureteral catheterization, his intake was 2100 c.c.; output, 1740 c.c. N.P.N. was 67 mgs., and Creatinine 3.7 mgs.

March 7, 1942—Following the ureteral catheterization, his general condition has improved. Patient has been passing urine in normal quantities. Cystoscopy and pyelography were carried out.

X-Ray report—"Negative for opaque calculi. Marked pyelonephritis with dilatation of pelvis and ureter bilaterally. Destructive change most marked at bases of calices."—C. W. Prowd, M.D.

March 10, 1942—Patient's condition has been improving. N.P.N. 43 mgs.

March 12, 1942—Temperature has been normal for the past 48 hours. He is apparently free of symptoms except for occasional pain in the right lumbar area.

Urine—S.G. 1010. pH. 7.0. Albumin—Trace. Sugar—None.

Microscopic—Occasional hyaline cast. Triple phosphates.

Patient was discharged from hospital.

March 23, 1942—Patient was re-admitted to hospital complaining of pain commencing in the right lower lumbar area and radiating anteriorly and downward to the lower right quadrant and involving the right testis.

Temperature, 98; pulse, 80; respirations, 20.

Urine—S. G. 1010. pH. 6.0. Albumin—Trace. Sugar—None.

Microscopic—Few pus cells. Occasional R.B.C.

N.P.N.—29 mgs.

Flat X-ray was negative for any evidence of calculus.

March 29, 1942—The pain had disappeared 24 hours after hospital admission. He was feeling quite well. Discharged from hospital.

Comment:

This man apparently developed an acute pyelonephritis, presumably from the effect of sulfadiazine, the earliest symptom being hæmaturia, which appeared on the fifth day of sulfadiazine treatment. This was gross hæmaturia which he voided just before his hospital discharge, though, unfortunately, the true significance of this was not realized until he left hospital. At this time his hand injury was well and his general condition was apparently normal. Within twenty-four hours, however, other symptoms suggesting pyelonephritis developed—pain in back, oliguria, fever, and continuation of the hæmaturia. He was re-admitted and his general condition was daily becoming more critical until he reached a point of twenty-four hours without having passed any urine whatever. The relief from this by ureteral dilatation and catheterization was almost miraculous—as a matter of fact, it recalled to mind the impression of a patient's dramatic recovery from hypoglycæmia following administration of glucose.

The pyelograms in this case are extremely interesting in exhibiting the amount of actual destruction in the kidneys themselves. It will be of interest to obtain pyelograms at some future date to study the amount of repair or permanent disability of the renal organs.

THE USE OF SNAKE VENOMS IN MEDICINE

LYON H. APPLEBY, M.D., F.R.C.S. (ENG.)

Read before the Vancouver Medical Association April 2, 1942.

There are but four venomous snakes in America, and it is perhaps not a useless bit of information to know what they are, and where they are to be found. The first of these is the common rattlesnake, widely distributed from coast to coast, but most common in the Prairies and foothill states and spreading into Canada through the tip of the dry belt of America in the region of Kamloops, and the areas close to the Montana border. The second venomous snake of America is the water Moccasin, widely distributed in the deep southeast and south central states, particularly abundant in the steaming marshes of Florida. The next snake is the common copperhead, found in the Atlantic seaboard states and extending up into southwestern Ontario. The fourth snake is the beautiful coral snake from the keys of Florida, and the islands adjacent thereto. Frightfully poisonous, this beautiful snake is cream coloured, slender as a pencil, with vivid red bands encircling its body. It is much less frequently seen than its other poisonous relatives.

If I were asked to describe the features distinguishing venomous from non-venomous snakes, I should mention two at the onset. First, the poisonous snake is almost always a thick chunky snake of fairly large size, whereas the slender slithery snakes are largely non-venomous. The two glaring exceptions are perhaps the two most deadly of all snakes—the small coral snake, slender and beautiful, and the black momba, of British East Africa, slender as a finger, fourteen feet long; but on the whole they are thick-bodied snakes. The second distinguishing feature is the slit pupil of poisonous snakes as opposed to the round pupil of the non-venomous snakes. This, of course, is not a universal attribute, but in North America at least, it obtains.

The constituents of snake venom are very interesting, and are allied to the veratrine and aconitine-like action of these drugs in medicine, in many instances. Roughly speaking, the venom of all poisonous snakes is the same, and is a great mixture of substances, most of them imperfectly understood, but which might come under the heading of proteolytic enzymes. Roughly these are as follows:

Proteins	hæmorrhagins	cytotoxins
mucus	agglutinins	hæmotoxins
enzymes	precipitins	neurotoxins
hæmolysins		

This also, I might say, obtains for all of the scorpions, Merry Widow spiders, wasps, hornets, and other venomous insects, bugs, bees, lizards, and reptiles.

But venoms differ radically in themselves, just as the blood films of individual humans show marked differences in content. Certain reptiles have a predominance of the coagulant element, others are largely hæmolytic, still others are neurotoxic, and as each species of snake varies from other species, so the action of the venom varies from species to species depending upon the particular ingredient which is dominant.

To the student of pharmacology, the use of snakes and their venoms is not new: there are to be found many references to them in the Cacodylic pharmacies of the dark ages. They are particularly popular even today in the medicaments of the Chinese, and the Hell's broth of the Witch's Cauldron is not so many years old. The medicinal use of serpents in classical literature is too common to need comment. Nowadays the mysticism and empiricism of the past is giving way to a more rational use, based on accurate clinical observation, planned and controlled laboratory experimentation, and modern pharmacosynthesis. The greatest difficulty in the past has been the collection and distribution of a venom in sterile form, containing the particular glucoside whose action is desired to the exclusion of remaining elements which may be highly undesirable, and no less toxic. That remains to this day the main difficulty. Sterilization may destroy the element we most desire; or such an element may be dominant but undesirable; and in but a few instances has science succeeded in synthesizing the active principles of certain

venoms. The similarity of American venoms led to the belief that polyvalent sera could be easily prepared, and the Antivenom Institute of America was instituted at Glenolden, Penn. This organization has since been taken over by Mulfords, who make much of the antivenom used in this country. However, it was soon found that sera developed against a snake of one species was nearly useless against certain others, largely because the varying content of venoms differed so widely in concentration. Roughly speaking, there are three classes of snake venom, all three of which are useful in medicine for widely differing pathological states. These three are the Crotalidæ as represented by the rattlesnake, whose venom among the other proteolytic enzymes contains an anti-convulsant factor; the Ancistrodon piscivorus or water Mocassin, representing the preponderance of the coagulating factor; and the cobra, Naia Naia, whose venom contains a large quantity of neurotoxin. Pharmacological products are usually put up representing so many mouse units per cc., the mouse unit representing the amount of venom which will kill a white mouse of a certain weight in a specified time. Venom is usually collected by pressing the fangs into a rubber capped test tube and expressing the venom from the pit by massage. Venom is then usually evaporated into crystals and as such is stable, whereas in the liquid state it becomes highly unstable. When one stops to consider, the whole question of snake venom has been seriously neglected. I know of no other biological product of a fraction of its potency which has not been extensively developed.

Rattlesnake Venom

Rattlesnakes have quantitatively rather a large amount of venom: as much as 250 mgm. may be injected at a single bite from a large diamondback. Rattlesnake venom contains a high degree of hæmotoxins and a relatively speaking low degree of neurotoxins. There are in addition numerous other proteolytic and cytolytic enzymes. Unfortunately there are many unseparable fractions in the venom and these have militated against its use. In addition, rattlesnake venom cannot be sterilized, which makes its use precarious. The nature of the desirable element in rattlesnake venom is wholly unknown, but is described as an anti-convulsant, and is undoubtedly a fraction of the neurotoxic content.

The literature of the early years of the present century between 1904-14 contained many references to the uses of rattlesnake venom in the treatment and control of epileptiform seizures. Most of this was, of course, based upon purely empirical observation. The difficulties attendant are three: the effects of by-products all too frequently overshadowed the neurotoxic effects which were desired, many hæmotoxic properties could not be isolated, and extensive hæmolysis complicated the treatment, and in addition the unsterile product gave rise to serious infections, so that on the whole one feels the physicians who used these early products were lucky indeed not to kill their patients. The product used was, I bleieve, marketed under the name of Crotalin, and a comprehensive review was published in 1914 by Dr. A. Thom of Boston[1]. While it has gradually passed into disuse, a recent revival of snake venom in epilepsy has recently taken place, using, however, cobra venom. This will be discussed later.

Snakes of the Coagulant Group:

The three snakes in this group to which I wish to make reference are the Mocassin snake, Russel's viper, and the Fer-de-Lance. The development of Moccasin snake venom as a therapeutic agent was largely due to the work of Peck and Rosenthal[2] at Mt. Sinai Hospital, New York, who published a series of cases in 1935. Once again the pharmacodynamics of Moccasin venom is not wholly known. It is, however, fairly well established that it acts by making the capillary wall less pervious, and so makes it more difficult for capillary escape. The original paper reported a series of cases of functional uterine hæmorrhage with excellent results. Moccasin venom is put up in 1-3000 dilution in ampoules with a mercuric preservative. The dosage is 0.4 cc. twice weekly, increasing to 1 cc. doses maintained for a couple of months. About the fourteenth day a local reaction of sensitivity begins to develop, the site of injection becomes inflamed, hot and tender, and while only minor general reactions occur, the local reaction which invariably occurs makes it important to give enough venom in the first two weeks to tide the

patient over a period of desensitization. These reactions of hypersensitivity occur usually after the fourth or fifth injection, desensitization with small doses of 0.05 cc. slowly develops, and the dose can then be increased without danger up to 1 cc. twice weekly.

This moccasin venom is apparently of no value in "picture" cases, frank hæmatological cases with blood pictures such as thrombocytopenic purpura, hæmophilia, are not affected by it, and its use should be confined to the types of hæmorrhages in which hæmatological findings do not depart from normal, except in so far as the picture may be changed by previous hæmorrhages. Peck uses moccasin venom as a test in thrombocytopenic purpura by intracutaneous injection of venom in a dilution so weak as not to affect normal individuals, but which causes a frank hæmorrhage in these cases. It can be used as a supplementary test to the better known tourniquet test. C. H. Watkins[3], reporting in Mayo Clinic staff proceedings, reports seven cases of menorrhagia described as of a functional type with excellent results. In all of these cases antuitrins, dilatation and curettage, and other standard methods such as ergot, styptics, X-rays, radium, etc., had failed, and hysterectomy was considered. Numerous other references are to be found in the literature where its use in similar cases has been equally satisfactory. I have three cases to report, in two of which marked alleviation of symptoms occurred.

MOCCASIN—3

	Nature	*Time Treated*	*Result*	
Case 1.	Metrorrhagia	4 months	Unrelieved	
Case 2.	Metrorrhagia	7 months	Relieved	
Case 3.	Metrorrhagia	9 weeks	Cured	66%

I wish now to discuss the use of Russell's Viper, and the venom of the Fer-de-Lance, as topical applications for the control of the oozing types of capillary hæmorrhage. I have used B. & W. Russell viper venom about equally with Lederle's preparation of the Fer-de-Lance. It is to be remembered that neither of these two preparations are to be injected. These are two of the most powerfully coagulant snakes known. The venom of Russell's viper, for instance, will in a dilution of 1-10,000 coagulate the blood of a hæmophilic with a bleeding time of 35 minutes, in 15 seconds; furthermore, its action is equally efficacious on citrated blood, heparinized blood, or blood plasma. That such a powerful coagulant should not have been more widely exploited is remarkable. It has been stated that the venom of Russell's viper retains its coagulant properties, and does not vanish until dilution of 1.000,000,000,000,000,000 is reached, which I think is 1 in a billion billion*. Recently Lederle's have succeeded in synthesizing the venom of the Fer-de-Lance, and this preparation is valuable and available.

The uses to which this may be put are almost too varied to be described. In general, it has proven of the greatest value in dental practice for stopping the difficult hæmorrhages sometimes following extraction; epistaxis, uterine bleeding, surface oozing of all kinds. Barnett[4] reports its use in a case of purpura hæmorrhagica with a platelet count of 60,000, bleeding time of 30 minutes, with a positive tourniquet test in which the arrest of hæmorrhage was immediate. He reports Gask has used it to stop liver hæmorrhage after surface damage from separating adhesions, after tonsillectomy, after prostatectomy, etc., where the use of local styptics and adrenalin had failed. Baker and Gibson[5] report arrest of hæmorrhages from a transfusion wound. Russell's viper presents a wide margin of safety; true, the venom as used contains a large number of unwanted fractions, but while these cannot be isolated, they are apparently inactive in the dilutions in which it is used: 1-10,000. It would require several litres of this concentration to have a lethal effect on humans. It is put up in dried crystals in a tiny bottle which requires only the addition of water to make it usable. In dried form it will preserve its activity apparently indefinitely. Pharmacologically, Fer-de-Lance and Russell's viper venom may be considered to be identical with the substance thrombin, and indeed it may actually prove so to be when chemically isolated in pure form. The venom of the Fer-de-Lance as prepared by Lederle's is perhaps theoretically a more stable preparation, being a synthetic product and put up in liquid form. Cranbrook reports that Russell's viper venom

* A million billion? or trillion? [Ed.]

1-10,000 will coagulate 10 times its bulk of hæmophilic blood in less than 20 seconds, neither irritant nor toxic, and does delay healing.

I am not a student of homœopathy, but I am indebted to Dr. Beeson[7] of Portland, Oregon, for pointing out to me some interesting facts in connection with the philosophy of similes, especially as evidenced by the use of snake venom. It is well known that oxalic acid in the test tube prevents coagulation. Steinberg and Brown[8] have isolated this substance in pure form from Shepherd purse, citrus fruits, rhubarb, etc. This is a powerfully coagulant substance which has been used for promoting blood coagulation under the trade name of Koagamin. Here is an instance where the doctrine of similes works in an unexpected way. Koagamin has been biologically assayed and a unit represents the amount which will reduce the coagulation time of a five-pound rabbit 50% in 15 minutes. Following along the doctrine of similes, the Chinese use ground tiger bones to make them strong. Highly cellular structures such as liver rarely bleed when crushed, as the liberation of tissue extracts promotes rapidly developing coagulation; and yet from this same liver, extracts of which promote coagulation, heparin, whose action is purely anti-coagulant, has been developed. Again, the headache following the libations of the night before is quite a familiar topic, and I believe is best remedied by, as Oliver Wendell Holmes has expressed it, "a little bit of the hair of the dog that bit you." And now we find such a powerful blood and capillary disintegrator as snakes' venom made, by dilution, to subserve a curative function in the very conditions which they themselves create. I wish to report 22 cases of arrest of hæmorrhage from topical applications of either Russell's viper or Fer-de-Lance. I strongly recommend that oozing types of hæmorrhages, difficult to control in patients with or without blood dyscrasias, be treated with one or other of these two highly potent preparations.

RUSSELL'S VIPER CASES—14

Nature	*No.*	*Result Immediate*	*No Result*
Dental hæmorrhage	9	8	1
Tonsillar fossa	3	3	0
Carcinoma of bladder	1	1	0
Circumcision—hæmophilic	1	3 mins.	0
		93%	

FER-DE-LANCE—22

Nature	*No.*	*Result Immediate*	*Slow*	*Negative*
Dental hæmorrhage	10	8	2	
Tonsillar hæmorrhage	2	1	1	
Post-transurethral	2	2		
Carcinoma of bladder	2	2		
Rectal polypus	1			1
Post op. gastric	1		(90%)	1
Purpura/transfusion cuts	2	2		1
Pancreatic oozing	2	2		

In my college days my old Professor of Medicine used to say the three chief needs of medicine today are: an accurate method of measuring the severity of pain, a purgative which is safe and active hypodermically, and a drug which will safely relieve pain without narcosis or addictions. As far as I am aware these needs remain unfulfilled. Dr. David Macht, Director of Research Dept., Hynson Westcott and Dunning of Baltimore, in 1935 presented to the profession of this country: Cobra venom as an analgesic for the relief of pain. The late Dr. Joseph Coll Bloodgood of Johns Hopkins, whose work in cancer research is gratefully remembered by all of us, was an interested co-worker in the original series of published cases involving its use. Macht reported 200 cases in which 70% showed definite relief from pain.

It so happens that the venom of the cobra is particularly rich in neurotoxin, which fraction is the desirable element in the relief of pain; years of painstaking work on the part of Macht has resulted in a product which is comparatively pure neurotoxin, and from which all the other constituents of a toxic nature have been removed. It has been sterilized, most of the protein content has been removed, so that what is now marketed is almost pure cobra neurotoxin. The preparation of Cobra venom has a rather interesting history. Originally the snakes were imported, milked in this country, and the product

used in a liquid state. This became highly unsatisfactory, as not only the snakes died, but the nature of the venom actually changed, and came more nearly to approximate the venom of native venomous reptiles with a marked reduction in the neurotoxin content. At the present time the venom is now imported direct from India in bottles of dried crystals. In considering the extreme toxicity of cobra venom, one is reminded of the couplet from Omar Khayyam: "One wonders what the Vintner buys, one half so precious as the goods he sells": one wonders what the serpent eats, one fraction as potent as the venom he produces.

When we consider the progress of Medicine in the March of Time, the treatment of pain seems to have been one of the laggards of the profession; apart from certain highly specialized neurological procedures, the relief of pain by the general practitioner remains as twenty years ago, largely a matter of adequate morphine. While we must remain grateful for morphine, it possesses many disadvantages. Morphine and its derivatives have a rapid action, developing their activity within a few minutes, its action is central and unfortunately a double one, acting both cortically and on the hypothalamic area, hence it becomes at once both hypnotic and analgesic: the effect of analgesia is purchased only at the cost of hypnosis. The effect even when supported by catalytic substances is transient and vanishes in a few hours at most. Continued use requires constantly increasing dosages until addiction becomes an established fact, and most of us, faced with the question of exhausting pain on the one hand, and morphine addiction on the other, unhesitatingly accept the latter, and order that the pain of chronic cancer be assuaged even at the cost of addiction. Unfortunately intelligence is undermined and all functions depressed, the sense of smell, hearing, taste and vision are all depressed, appetite is destroyed, nourishment becomes a problem, constipation is an increasingly formidable factor; until at length the patient is reduced to the status of an animated vegetable living from one hypo to the next.

In presenting Cobra neurotoxin as one of the newer therapeutic agents for the relief of pain, I do not at all acclaim it at the present time as a panacea. But the prime purpose of any new drug must be that it shall at least do no harm, and that during the stages of its development a substantial percentage of good results is all that surely can be asked.

Who actually did the initial work on Cobra venom I do not know, but in the Pasteur Institute in Paris, Calmette[9] and his co-workers are among the earliest with which I am familiar, this in 1933. Undoubtedly, however, the pioneer in this country has been Macht of Baltimore[10], whose publications have now become quite numerous. Almost all of my information in this regard has been received direct from Dr. Macht, a fact I here gratefully acknowledge.

The effect of Cobra venom pharmacologically is a central one, its action being a purely hypothalamic one. It does not cause any local analgesic action, nor does it relieve pain through any local anæsthetic action. It does not paralyse nerve endings in either mucus membrane or skin, and it does not block impulses in either ascending or descending fibres. It does not depress special senses of hearing, smell, vision, taste; in fact, all of these are stimulated and visual fields as measured by perimeter tests are found to be increased. Cobra venom has a distinctly stimulating effect on mental performance, and this stimulation effect is actual and not a matter of relativity.

The action of cobra venom requires a building up period of several days. Its action is slow to develop, but once developed, persists over a period of days or weeks, instead of hours as in other analgesics. There is not the slightest suggestion of addiction, and the relief from pain is accomplished without the benumbing of intelligence; the appetite and metabolism are improved, weight is usually gained in consequence. Cobra Venom does not affect pregnancy, gestation or labour, or the well-being of the offspring of a mother under its influence. Red cell and hæmoglobin estimations remain unchanged even after months of administration. There is occasionally a mild leucocytosis. Blood sugar, blood N.P.N. are unaffected, cerebro-spinal fluid, and electrocardiograms have remained normal, urine has been unaffected. In many instances, however, there has been a material

degeneration of the patient from the inexorable advance of the disease from which they suffered, and for which the venom had been given.

The use of cobra venom, in which I am interested largely for its relief of pain in carcinoma cases, has gradually spread into other realms of medicine. Macht[11] reports its use in tabes, cancer of the skin, X-ray burns, herpes zoster, post herpetic neuralgias. Its anticonvulsant properties have been reported upon by Gaugh and Williams[12] in connection with paralysis agitans. Lowell Thomas[13] of New York reports complete relief in his own case of migraine. These are substantiated by marked improvement by other writers. Parsonette and Bernheim[14] report its successful use in stenocardia and angina. Chopra and Chowan[15] report 70% of relief in a great variety of cases, while its use in neuritis, arthritis, tic douloureux, Berger's disease, fibromyositis, tabes, and the neurological manifestations of leprosy, is building an extensive literature. Recently its use in the treatment of epileptiform seizures has been reported by the French-Canadians Barbeau and Laurendeau[16].

A word about the margin of safety in the use of Cobra venom. In morphine we work on about a 1:8 ratio—if a quarter of a grain is an average dose, and two grains an average lethal dose. In Cobra venom the lethal dose is about 15 mgm.; there is 1/20 mgm. in 10 mouse units, so that the margin of safety is roughly 1:300. This wide margin of safety has in recent months caused me to alter my dosages radically, and I now usually give 10 mouse units the first day, 20 the second,30 the third, 20 the fourth, 10 the fifth, and 10 every secnd day thereafter of the Hynson Westcott and Dunning preparation. I have found this new product entirely unpredictable. In my experience it either works magically or it simply does not act at all. Originally I believed that the apparently completely inert character of certain phials of venom was due to a labile product which had suffered deterioration; now, however, I have so many instances in which one set of phials was inert in one case, and perfectly active in others, that I believe we must look more deeply for the explanation of this rather baffling phenomenon. In one instance a man with stenocardia has been taking 5 mouse units every second day for eight months with complete relief, then a box arrived which was inert. His sister, with a carcinoma involving the spine, had had complete relief for three months, and at the same time received a supply which seemed to be completely inert. At her suggestion they traded boxes of ampoules with excellent relief in both instances. In about 60% of my cases, briefly, nothing happened, and were it not for the fact that in the great majority of the remainder almost complete relief was obtained, I am afraid I should have lost interest.

I wish to report 78 cases who during the past two years have had Cobra venom for the relief of pain.

COBRA VENOM

	Cases	*Good Results*	*No Result*	*Untoward Effects*
Carcinoma in general	60	26	34	1
Cardiac pain	4	2	2	
Tic douloureux	7	2	5	
Post-herpetic neuralgia	1	1		
Arthritis	2	1	1	1
Migraine	1	1		
Dysmenorrhœa	2	2		
Buergers	1		1	
Totals	78	35	43	2

I wish to present these successful cases in more detail in order to show that even if 60% have not been successful, that three such as these well justifies a continuation of the experiment. First a woman, 58, cancer of the breast, 19 months' history, with metastases in her spine and skull, is coming now to her death in St. Paul's Hospital, and has never had a fraction of a grain of morphine or any of its derivatives at any time. Hypnotics have been routine at night. Second a woman, carcinoma of the stomach, eleven months history, died without ever having had a dose of morphine. Third a man, carcinoma of stomach, extensive visceral metastases, taking two grains of morphia by hypo every three hours with 3 grains of nembutal hs., and grs. 1/16 of Dilaudid.

It was explained to this man that morphia was not being denied him, but that we wished to test a new drug. He co-operated, asked for morphine only when he really required it. On the fifth day he cut his morphia 50%, on the eleventh day he discontinued it, and on the seventeenth day he died without having had any for six days, and with great improvement in his general outlook, and he was almost entirely freed from the depression which a knowledge of his hopelessness up till then had seemed to engender. It was a voluntary requital.

In conclusion I ask you once again to look at this slide outlining the constituents of snake venom. Why are we so interested at this time? Today as never before the hæmatologist is invading the surgical field to our great advantage, the work of Selyea has made the surgeon conscious of hypoproteinæmias, hæmatocrit observations, and the rational uses of plasma serum and whole blood. Heparin has swept across the horizon the past few years: costly, expensive, dangerous and cumbersome. Who can say that in that list of hæmotoxins in snakes' venom will not be isolated a hæmorrhagin or hæmolysin fraction which will provide the answer for which heparin at present gropes? The work of Steinberg and Brown has presented an entirely new conception regarding the mechanism in the treatment and control of hæmorrhage in the discovery of the oxalic acid fraction of Shepherds purse; who knows but among the powerful coagulants, cytotoxins and agglutinins of snakes' venom, some tie-up with oxalic acid may not revolutionize the treatment of hæmorrhage?

I believe that snake venom therapy is more interesting than factual, more hopeful perhaps than actual, but I believe that in such a potent preparation there must lie a powerful factor for good; a factor which it is not for me to isolate—this is a problem for the synthetic chemist; and when the separate fractions of snake venom are before us, each synthesized to their own purpose and supplied to us, potent, sterile and dependable, then I think will have arrived one of the things to which I look forward in Medicine.

BIBLIOGRAPHY

1. Thom, D. A.: Present status of Crotalin in Treatment of Epilepsy. Boston Med & Surg. J., 171:933, 1914.
2. Peck and Tosenthal: Mt. Sinai Hosp., N.Y. J.A.M.A., 1935, vol. 104, p. 1066.
3. Watkins, C. H.: Proceedings of Staff Meeting of Mayo Clinic, 1936, 261, vol ii, No. 17.
4. Burgett Barnet—Proceedings of Royal Soc. of Med., 1935, vol. XXVIII, No. 11.
5. Baker and Gibson: Lancet, vol. 1, 1936.
7. Besson, John H., Portland, Ore., personal communication.
8. Steinberg and Brown: Amer. Jour. of Physiology, 1939, p. 638.
6. Cambrook, I. Dieper: Proc. of Royal Soc. of Med., 1936, vol. XXIX, No. 3.
9. Calmette, A.: Treatment des Algies et des tuneurs par le venim de Cobra. Bull. Acad. de Med., Paris, 109:373:1933.
10. Macht, David I.: Therapeutic uses of snake venom. Medical Record, Dec., 1936, etc.
11. Macht, David I.: Cobra venom in Dermatology and Syphilology. Urological and Cutaneous Review, Feb., 1940.
12. Gogh and Williams: Southern Med Journal, 1938.
13. Thomas Lowell: Migraine. Medical Record, 1940.
14. Parsonette and Berheim: Stenocardia and Angina. American Journal of Medical Sciences, Nov., 1940.
15. Chapra and Chowan: India Medical Gazette, 1940.
16. Barbeau and Laurendeau: Union Med. du Canada, 68:363, 1939. 2. Journal de l'Hotel Dieu de Montreal, 9:114, 1940.

LAURENCE-MOON-BIEDL SYNDROME

By J. H. B. Grant, M.D., and J. A. Smith, M.D.

In 1866 two English ophthalmologists, Laurence and Moon, described four cases in which were present some or all of the following syndrome: obesity, hypogenitalism, mental deficiency, polydactylism and pigmentary disturbance of the retina (Retinitis pigmentosa). Although they intimated that this peculiar combination of clinical signs might be more than coincidence, the fact was not fully appreciated until comparatively recent times that its various components make up a unit syndrome and that its familial character is of fundamental importance.

Biedl, in Germany, in 1922, placed appropriate emphasis on the significance of these factors and his name has come to share with the original authors the title by which this condition is now commonly known.

The first case was reported in America in 1925.

Up to 1937, only twenty-four instances of the complete syndrome were found reported in an exhaustive survey of medical literature undertaken by Mitchell and co-workers at the University of Cincinnati, although they found one hundred and two cases reported under this diagnosis and all of these showed one or more parts of this syndrome. On the other hand, fourteen of twenty-four complete cases were super-complete; that is, they showed additional hereditary degenerative symptoms.

Now let us study the individual parts of this syndrome:

1. *Obesity*: This is of the Froelich's type with marked development of fat in the mammary region, the abdomen, the genital regions and thighs.

2. *Hypogenitalism*: This varies in its degree; it may be entirely absent or difficult to determine. Particularly is this true with girls and in the period before secondary sex changes take place.

3. *Mental Deficiency*: In most instances, this is apparent early. Frequently, it may develop later in a child whose mental progress has been normal. Mental retardation is rarely absent but may be very mild.

4. *Polydactylism*: This anomaly is seen also in persons not affected by this syndrome. It has many variations. It may be present in one or all extremities, symmetrical or asymmetrical. It may vary in location and in structural type. The extra digit is always toward the little finger and varies from a small fibrous nodule, with or without bone structure, to a complete digit.

Syndactylism may be present as an additional anomaly or may occur in the absence of supernumerary digits.

5. *Retinitis pigmentosa*: Visual disturbance is noted early in life although occasionally it does not make its appearance until the age of five or later.

Retinal degeneration is a constant finding with varying amounts of pigmentary disturbance. Atypical forms of retinitis pigmentosa are by far the most common forms.

6. In addition to the five cardinal signs of the syndrome Mitchell has found many others reported: nystagmus, 31%; strabismus, 20%; dwarfism, 17%; deformities of the skull, 8%; atrophy of the optic nerve with retinitis pigmentosa, 4%; deafness, 4%; and congenital heart disease, 3%. Single cases of other abnormalities are known.

Differential Diagnosis:

Froelich's Syndrome, which is made up of three parts, obesity, hypogenitalism, and hypopituitarism, obviously shows the first two factors but not the important ones of polydactylism and retinitis pigmentosa.

Amaurotic Family Idiocy may have pigmentary abnormalities in the retina. It is also hereditary but signs in this disease come on gradually at about the age of five years in a previously normal child. It is rapidly progressive, showing loss of intelligence, progressive motor weakness ending in paralysis, and death usually between fourteen and sixteen years of age.

Pathology:

In the field of pathology both the hypophysis (pituitary gland) and the hypothalamus have been ruled out as causative factors.

The most acceptable concept is that the condition results from a hereditary developmental disturbance and that the various parts of the syndrome represent mesoblastic (polydactylism) and epiblastic (obesity, retinitis pigmentosa, mental deficiency and genital dystrophy) defects which are recessive and due to mutations of two genes in the same chromosome.

TREATMENT:

There is no treatment for many of these factors which are obviously congenital abnormalities. Extra digits are removed by operation. The obesity can be helped to some extent by diet and thyroid extract. Pituitary extract has little or no effect.

CASE HISTORY:

The patient is a white female, aged fourteen years, admitted to the Vancouver General Hospital on February 8, 1942 (referred by Dr. N. G. Ball, of Oliver, B.C.). There are four other children in the family, two of whom weighed twelve pounds at birth and were fat in later years. The patient also weighed twelve pounds at birth and has always been overweight. She has bad muscular control and cannot pick up objects readily. She stumbles frequently on walking and is generally clumsy and awkward. She has never had good bladder control. She is anti-social in behaviour and is unhappy.

Her weight now is one hundred and eighty-four pounds, with the typical Froelich's distribution of fat in breasts, abdomen and thighs.

She has not menstruated yet. The pubic hair is quite normal in amount. The brests are moderately large.

She shows scars on both hands and both feet where supernumerary digits have been removed. (She was born with six well-developed digits on each hand and each foot; the extra digits were all on the side of the little fingers and toes.)

Her intelligence quotient is now 62. Her mental age is calculated to be eight years and nine months. This shows a moderate degree of mental deficiency. (Tests were made by the Child Guidance Clinic, Vancouver.)

Her vision and condition of eyes has been carefully studied by Dr. J. A. Smith, Vancouver, who makes the following report:

The patient sits with her head bowed, seemingly uninterested in her surroundings. She gives a history of having been afflicted with night blindness for some years. She does not think vision is becoming worse. At present it is 20/200 in each eye with her glasses (minus 75 sph. in each).

Examination shows a stellate cataract in each eye. Each fundus shows a marked retinal degeneration with greenish yellow waxy appearing nerve heads. No characteristic bone corpuscle-like deposits of pigment can be seen anywhere. The fields are very markedly contracted to within the ten degree circle.

This is definitely a case of Retinitis Pigmentosa without the characteristic pigment. Nettleship has stated that cases without pigment are only early cases of the pigmented variety. The bowing of the head is characteristic of the disease.

Further examinations were as follows:

Radiographic examination of the head showed the sella turcica to be smaller and less open than usual, the clinoid processes being rather larger than normal.

Radiographic examination showed the wrist to be normal for the stated age.

Blood Kahn was negative; blood calcium 11.57. Sugar curve: Blood fasting 90—1 hour 106. Urine sugar 0. Blood cholesterol, 95. Basal metabolism rate, 3%. Blood examination showed: R.B.C. 3,950,000; W.B.C. 9,300; hæmoglobin 77%; sedimentation rate 3.34; urine albumin +1, occasional white blood cells.

There is, therefore, no evidence of hypothyroidism. There is no evidence of pituitary tumour.

To summarize: This patient shows definitely four cardinal factors of Laurence-Moon-Biedl Syndrome, namely: obesity, polydactylism, mental deficiency and retinitis pigmentosa. At her age of fourteen, we cannot say positively that hypogenitalism is present. She has, also, cataracts in both eyes.

REFERENCES:

1. Laurence, J. Z., and Moon, R. C.: *Brit. Ophth. Rev.*, 2:32, 1866.
2. Biedl, A.: *Deutsche Med. Wchnschr.*, 48:1630, 1922.
3. Warkany, J., Franenberger, G. S., and Mitchell, A. G.:*Am. J. Dis. Child.*, 53.455, 1937.
4. Cooperstock, M.: *Am. J. Dis. Child.*, 54:334, 1937.

SOME OBSERVATIONS OF CONDITIONS CAUSED BY THE PROSTATE GLAND

H. W. Epp, B.Sc., M..D, C.M., L.M.C.C.
Sardis, B.C.

[It is with great pleasure that the Bulletin publishes this original communication by Dr. H. W. Epp, of Sardis. It is, in our opinion, an excellent piece of work—most suggestive and constructive.

Dr. Epp's remarks are, perhaps, of especial interest to the general practitioner, and as such should have a wide appeal. His "observations," as he modestly puts it, reflect great credit upon his keenness and insight, and deserve our attention. Euch one of us has cases such as he describes, which worry us a great deal. If we (and the patient) can obtain a successful result by these methods, we shall be extremely grateful to Dr. Epp. —Ed.]

The observations cited in this paper are presented to the readers of the Bulletin for what they are worth, and with the hope that they may induce some energetic research man to investigate these phenomena at their source and present a complete picture of the relationship of cause and effect, so that mankind in general may be benefited.

According to the old, orthodox textbooks (and many of the new ones), the first trouble a chronically abnormal or chronically diseased prostate gland causes, is interference with normal micturition. This interference may be slight, such as frequency, especially at night, changes in the stream, dribbling or spasmodic incontinence, or it may be more severe, such as dysuria, even to complete obstruction, depending on the degree of interference.

These are symptoms caused by interference with the normal flow of the urine and, therefore, pertain to the urinary system. Now, anatomically, the prostate gland belongs to that system, either by accident or design, but physiologically it belongs to the genital system. Nevertheless, very few symptoms are given in the textbooks referring to this system, and those which are given are the result of a local, chronic inflammation, either pre-existing or still present. I refer to such symptoms as prostatorrhœa, functional impotence or premature ejaculation (due to hyperæsthesia of the ejaculatory ducts), urethrorrhœa *ex libidine*, spermatorrhœa, etc. These are local manifestations for which the prostate gland can readily be held responsible. However, the object of this paper is not to discuss textbook pictures of prostatic conditions, originating either in the urinary or genital system, but to present pictures or cases, apparently of prostatic origin, not mentioned in textbooks.

Complaints such as a dull ache in the lower abdomen, pain in the back, especially in the midsacral region, pain at the tip of the penis, numbness around the buttocks, sensation of heaviness or tiredness over the entire pelvis, sensation of tiredness from the hips down, a "tired feeling" all over the body, have been cleared up or greatly relieved by massaging the prostate gland.

CASE REPORTS

1. Married man, age about sixty, retired farmer, complained of a dull ache about midway between the umbilicus and pubic bone. This ache was brought on by walking or by sitting in a hard chair for any length of time. He had been told by several doctors that it might be caused by chronic appendicitis. There were no urinary symptoms.

I cudgelled my brains for a couple of years over that case, since he was a personal friend of mine and I was anxious to help him. Being still in the textbook stage at that time, I invariably ran into dead-end streets and had to start from the beginning again. Finally he admitted that his urine did not flow as freely as it had years ago. Still I could not see the connection, but I took a pot-shot in the dark and examined his prostate gland, which was only moderately enlarged. I massaged it at the same time, and lo and behold! his ache had gone.

I offered to give him a few more massages, but he refused, claiming that the dull ache had entirely gone. I do not know whether that massage helped the interference with micturition at all. This was in 1935, shortly before I left Manitoba, so I don't know how long the "cure" lasted.

2. Man, age about 40, divorced, drove a caterpillar in a logging camp, complained of pain in the back, especially at night. It prevented him from enjoying an uninterrupted sleep. He would go to sleep in one position and wake up shortly afterwards from pain in the back. He would change his position, go to sleep, and make up again to change his position, and so on through the night. I massaged his gland, and when he came back in a few days he told me he was 500 per cent better. I gave him a few more massages and that back bothered him no more. He moved away, so I am unable to state how long *that* "cure" lasted.

3. Single man, about 35, labourer, came in with what appeared to be a typical T.B. hip limp. His right leg appeared about two inches shorter than his left. He had been in the hospital for treatment but

it had been unavailing. Examination of the hip-joint and spine revealed nothing. His prostate was moderately enlarged and moderately tender. After massaging the gland, the shortness of that right leg disappeared instantly and he walked without a limp. But unfortunately both signs came back in a day or two. However, this showed us that we were on the right track and we kept the treatment up for a few weeks. The signs, however, kept on returning. So in addition to the massages, I had him put on all the heat he could bear on the lower pelvis and the hip-joint, and this cleared up the condition. This was about four years ago. He is still working around here, but the condition has not returned.

4. Married man, age 32, farmer, complained of pain at the tip of his penis. Examination locally was negative. A few prostatic massages cleared up the condition. That was about three years ago, and it has not returned.

5. Married man, about 40, electrician, had recurrent attacks of numbness about the buttocks. A few massages cleared them up but they keep coming back every 8-10 months.

6. Married man, age about 50, farmer, had no "pep," no ambition, no strength. He did not care "whether school kept" or not. If he forced himself to work he was tired in a very short time. No pain anywhere. Heart was good, blood pressure within normal limits, urine negative. A few massages restored his vigour. This was last summer, and I have not heard from him since.

7. Married man, age 35, farmer, was almost dead from the hips down. When he tried to work his legs and hips got so tired he could hardly move them. When he walked with other people they all walked too fast for him. He used to live in the interior of B. C. and went from place to place for help. Then he moved into this valley hoping a change of climate might be of benefit. He had all his teeth out on the advice of a doctor. He was minus his teeth and minus a lot of money but still plus his wooden legs. Improvement set in after the first massage, and he recovered completely in about a month. That was last January. He is working now.

This variety of cases should be sufficient to illustrate the complexity of conditions that yield to prostatic massage and have no apparent relation to that gland. It is beyond my ability to give any pathological reason or even hazard a substantial guess, but the results spek for themselves.

Diagnosis of these conditions is mostly a hit-or-miss affair. Sometimes it is arrived at by the process of elimination, sometimes diagnostic therapeutics, i.e., give a few treatments (they will never do anybody any harm), and if the condition the patient complains of shows signs of improvement, the prostate is considered the causative factor of that condition. If there is any pain present anywhere, as in the case mentioned above, pain at the tip of the penis, or pain in the midsacral region, this pain is greatly intensified during the process of massaging. If this intensification of pain occurs, it can be assumed with a high degree of certainty that the pain is caused by the prostate. In the case of the patient with the "wooden legs", he assured me definitely, after the first treatment, that he could feel that that was where his trouble came from. In the case of the patient who felt "pepless" all over, wtihout any symptoms of pain, discomfort or urinary interference, massage was performed just as a shot in the dark with gratifying results. I have had men come in without any definite complaints or symptoms but all hunched up like "old mother Hubbard", and walk out as erect as a major, after one massage.

Anatomically, the prostate gland surrounds the confluence of the urinary tract and the genital tract, but physiologically and histologically belongs only to the genital system. The glandular tissue occupies comparatively small areas in each of the three lobes. Functionally, the only work this gland is called upon to do is to secrete a fluid which is poured into the urethra at the time of the ejaculation of the semen and imparts motility to the spermatozoa. It also contains such a large number of lymphatics that the gland has been termed a lymphatic sponge. Whether the gland secretes any endocrine substance is not known, but the possibility is there.

Is it possible that the conditions enumerated above, and similar ones, could be brought about by a congestion in the gland of the glandular secretion or of the lymph stream or both? The fact that massage relieves the conditions seems to indicate that there is some sort of congestion present, rather than an inflammation. Furthermore, the fact that this gland belongs to the genital system causes one to wonder whether that is the reason why a slight disorder in that gland affects the entire body, as it does in some cases. However, these are only speculations and have to be investigated.

The prostate gland appears to be the poor neglected orphan in our art of healing, in spite of the fact that it belongs to two entirely different systems, the urinary and the genital, with the possibility of its secreting a hormone of some sort, which influences the entire body. In many cases it will be a well repaid effort on the part of the physician

to examine that gland closely, even in the absence of any signs or symptoms pertaining to that gland.

Massaging the prostate is quite an art in itself. Frequently, digital massage through the rectum is performed by having the man lie on the side and moving the straight index finger to and fro. With the patient in that position, it is very awkward for the masseur to get at the gland properly and exert the required, graduated pressure. Furthermore, with the inserted index finger in a straight position it is impossible to put the pressure on the places desired. I find it much more satisfactory to have the patient stand up, with the feet slightly apart, knees straight, bent over with the elbows resting on the table or the hands on a chair for support. I take my position on the left side of the patient with my hip against his hip. After spreading the buttocks apart with the fingers of my left hand, to facilitate the insertion of the gloved and lubricated right index finger into the rectum, I put my left hand over the patient's right hip, so as to steady him.

This procedure is followed by an examination of the gland. Its size is determined by *gently* moving the finger, first over and around one lateral lobe and then the other. The size of the isthmus is also nted. The size of the lateral lobes is compared. Quite frequently one is found to be considerably larger than the other, or one is much more tender than the other. The contour, consistency and tenderness of all the lobes is also carefully noted.

In massagin, a radial movement is employed from the periphery of the lateral lobes toward the isthmus, with a slightly flexed finger, so that only the tip of the finger is in close contact with the tissues. Very often one or the other or both of the lateral lobes are found to be very tender, even if there is little enlargement. Massage, therefore, should be done very gently the first tim. As the treatment progresses the tenderness becomes less, and more pressure may be used in subsequent treatments. Two treatments a week is usually sufficient, because there is always danger of causing undue irritation and hence doing more harm than good.

In addition to these massages, astringent rectal suppositories are prescribed occasionally, directing the patient to insert on once or twice daily.

CANCER SECTION

WHEN AND HOW TO BIOPSY A TUMOUR OF THE BREAST

There have been many learned articles written on the early diagnosis of cancer of the breast and most of these articles emphasize the late clinical signs of fixity of the tumour to deep structures of the breast, dimpling and fixation of the skin over the growth and palpable glands in the axilla. However, these are now considered to be relatively late signs and as such are unwelcome.

What, then, are the signs of early cancer of the breast? If one wants to get down to basic facts without much ado, the answer comes promptly—there is no accurate clinical method of diagnosing cancer of the breast early. The only way to be certain is to remove all hard lumps of the male or female breasts for biopsy. When one of those lumps is malignant, then the life of that patient is saved. If it is benign, little harm is done. In one eastern centre, a statement was made recently that two-thirds of the cancers of the breast coming to operation were diagnosed by biopsy and biopsy alone in recent years, whereas previously only one-third had been diagnosed by microscopic study. This is a significant trend and should have its effect on the mortality rate of carcinoma of the breast.

How and when to take a biopsy of the breast is another problem. The ideal set-up, of course, is an operating room with a pathologist in attendance, where, immediately after the removal of the tumour, the pathologist examines the tissue and pronounces on its malignancy or benignity. Unfortunately, a pathologist is not always available and the patient may not have sufficient funds to enable her to travel to a centre where the specimen can be taken in that manner.

The next best method, although definitely the second best method, is the wide excision of the tumour *en masse*. The removed specimen should be placed in a solution

of five per cent formalin and sent to the nearest pathologist with a specific history as to the name of the patient, age, sex, duration and site of the tumour. If the tumour is removed completely, and in one piece, there is less danger of spreading the malignancy into the surrounding tissues and stimulating its growth, than if a wedge-shaped piece is excised from the tumour mass itself. This method should be used with caution and preferably only in those cases where the tumour is small and lends itself readily to complete excision. This type of biopsy is better than no biopsy at all. Following immediately on a positive report, a radical amputation with thorough dissection of the glands of the glands and stripping of the vessels should be promptly undertaken.

Nunn & Thomson

†

2559 Cambie Street **Vancouver, B. C.**

IS THERE AN ARTHRITIS-ECZEMA SYNDROME?

Both are claimed to be allergic. Both suggest mineral deficiency and impaired elimination. Clinically, each is symptomatically improved by the oral use of

LYXANTHINE ASTIER

which combines the therapeutic actions of iodine, calcium, sulphur, and lysidin bitartrate — a potent eliminator of endogenous toxic waste.

Since the best evidence is clinical evidence, write for literature and sample. L-16

Canadian Distributors

ROUGIER FRERES

350 Le Moyne Street, Montreal

Colonic Irrigation Centre

Up-to-date scientific treatments

COLONIC IRRIGATIONS, SHORT WAVE DIATHERMY, COLD QUARTZ ULTRA VIOLET RAY, STEAM SWEATS, SHOWER AND MASSAGE.

Graduate Nurses Only in Attendance

Superintendent
E. M. LEONARD, R.N.
Post Graduate Mayo Bros.

1119 Vancouver Block
VANCOUVER, B. C.
MArine 3723

314 Scollard Building
Victoria, B. C.