THE

BULLETIN

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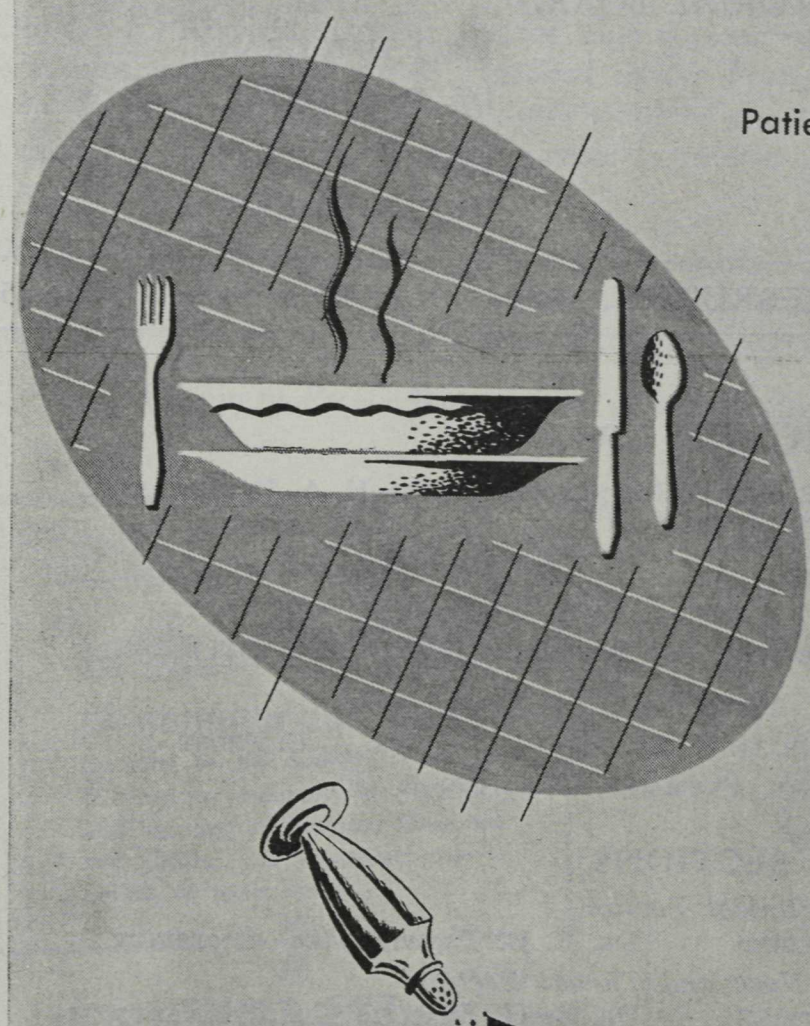

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Founded 1898 : Incorporated 1906.

Programme for Fiftieth Annual Session

(Spring Session)

ebruary 17th CLINICAL MEETING—St. Paul's Hospital, Nurses' Auditorium.

Iarch 5th (Friday) OSLER DINNER AND LECTURE—Hotel Vancouver, Banquet Room.
Osler Lecturer—Dr. Murray Blair.

Iarch 16th CLINICAL MEETING—Children's Hospital.

pril 6th GENERAL MEETING—Auditorium, Medical-Dental Building.
Speaker—to be announced.

pril 20th CLINICAL MEETING—Place of meeting to be announced.

Iay 4th ANNUAL MEETING—Auditorium, Medical-Dental Building.

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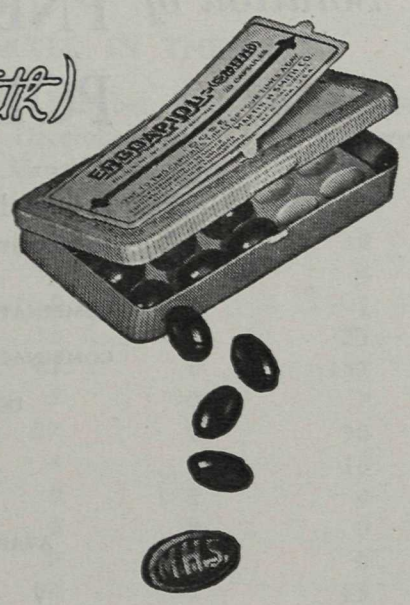

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MacLeod, C. M.; Hodges, R. G.; Heidelberger, M., and Bernhard, W. G.; J. Exp. Med. *82:*445 (Dec. 1) 1945.

Photomicrograph of DIPLOCOCCUS PNEUMONIAE (magnified 1,350 times). after "typing" with homologous antiserum by Neufeld method. The swollen, unstained, sharply outlined capsules contain the type-specific polysaccharide, which is mixed with similar antigens from other types of pneumococci in the preparation of Solution of Pneumococcus Polysaccharides.

In the above mentioned investigation on 17,035 subjects with a preparation made by Squibb, pneumonia of the types represented in the vaccine was entirely eliminated in the immunized group (8,586), excepting for four cases which developed before specific immunity had been established. And in the non-immunized group of 8,449 controls, all of whom were closely associated with the immunized group, the incidence of these types of pneumonia was *greatly lowered* through the reduction of "carriers." Reactions were mild. The slight arm soreness reported by those injected lasted only 3 to 4 days.

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VANCOUVER HEALTH DEPARTMENT

ASES OF COMMUNICABLE DISEASE REPORTED IN THE CITY

STATISTICS—DECEMBER, 1947

Total Population—Estimated	339,350
Chinese " "	5,980
Hindu " "	118

	Number	*Rate Per 1,000 Population*
Total deaths	400	13.9
Chinese deaths	22	43.3
Deaths, residents onlyy	378	13.8

BIRTH REGISTRATIONS

Male	407	
Female	377	
	784	27.2

INFANT MORTALITY	December, 1947	December, 1946
Deaths under 1 year of age	15	21
Death rate per 1,000 live birth	25.5	25.5
Stillbirths (not included above)	7	6

CASES OF COMMUNICABLE DISEASE REPORTED IN THE CITY

	Number December, 1947		Rate Per 1,000 Population January, 1948	
	Cases	Deaths	Cases	Deaths
arlet Fever	12	0	18	0
phtheria	1	0	4	1
phtheria Carrier	0	0	1	0
icken Pox	36	0	71	0
easles	61	0	157	0
ubella	7	0	7	0
umps	27	0	30	0
hooping Cough	8	0	10	0
yphoid Fever	0	1	0	0
ndulant Fever	2	0	0	0
liomyelitis	0	0	0	0
uberculosis	54	13	33	0
rysipelas	5	0	1	0
eningococcus (Meningitis)	1	1	2	0
ifectious Jaundice	0	0	0	0
lmonellosis	1	0	3	0
lmonellosis (Carrier)	0	0	0	0
ysentery	0	1	0	0
ysentery (Carriers)	0	0	0	0
etanus	0	0	0	0
yphilis	61	4	0	0
onorrhœa	209	0	0	0
ancer—(Reportable)				
Resident	97	0	92	0
Non-Resident	44	0	18	0

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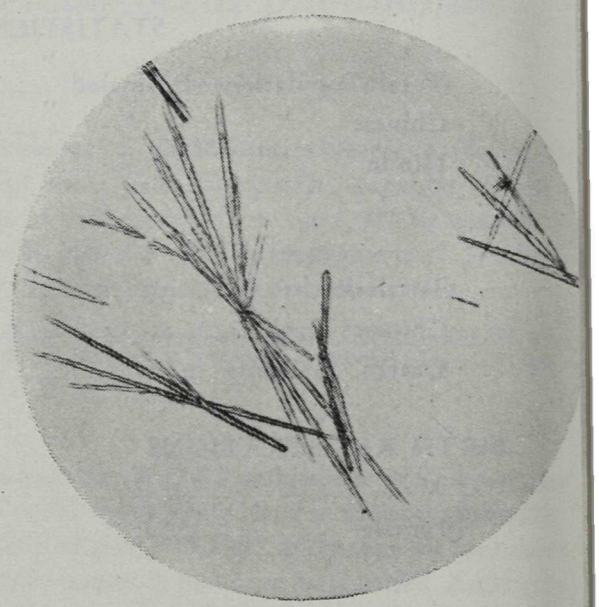

PHOTOMICROGRAPH OF PENICILLIN CRYSTALS

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Highly purified Crystalline Potassium Penicillin *G* is supplied by the Laboratories in sealed rubber stoppered vials of 100,000, 200,000, 300,000 and 500,000 International Units. No refrigeration i required.

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Liquid, free-flowing Penicillin in Oil and Wax, prepared from Crystalline Potassium Penicillin *G* is also supplied in 10-cc. vials each containing 3,000,000 International Units. No refrigeration o pre-warming is required.

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MACDONALD'S PRESCRIPTIONS LIMITED

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The Editor's Page

As another session of the Provincial Legislature approaches, the perennial demand Health Insurance is being again heard in the land. Quite understandably, the most l element is to be found among the ranks of Labour, and those of the community se incomes are on the lower levels—and with the costs of hospitalisation as they and with a constantly rising index of prices in every department of life, one cannot sympathise with those who feel that things are rapidly coming to the breaking t. Our new Premier, Mr. Byron Johnson, is evidently deeply concerned over this ter, and he is reported to have stated that his government is proposing to look into matter of hospitalisation. It is not clear, from the published reports, whether or not s thinking of going any further at the present time, or whether this is to be regarded he first step in a wider scheme, to be completed in stages.

From time to time, in the discussions which have been held within the ranks of the lical profession on this matter, it has been suggested that Health Insurance, to which n organized body we have given our approval, should be arrived at by a series of s, and not as an entity complete from the beginning. Some of our wisest leaders e urged that it is too big a thing to tackle all at once, and that we should make what nges must be made, gradually and with due attention to the giving of relief from present strain, by deciding where the need for relief is the greatest. It can hardly be said that at the present time, the cost of hospitalisation is the heaviest burden on the . Not only is the cost of hospital care becoming prohibitive, but the drastic shortage hospital accommodation is rapidly reaching the danger point. We think that Premier nson is to be commended in that he has grasped this point, and is going to do some-ng about it.

If this step could be successfully taken, we feel that a great deal will have been done. y scheme of the sort will in all probability entail a considerable deal of new hospital lding—since any plan which provides free hospital care will undoubtedly lead to lefinite increase in the number of hospital patients. This does not at all imply that re will be any abuse of the scheme—there would be a great many more anyway, if those who should have hospital care but cannot now afford it, or cannot get beds to upy, were able to obtain it.

What the next step should be is a matter for very careful consideration. Certainly last step should be the provision by any means whatever of free medical care, and en we say "free," we include prepaid medical care of any kind. The burning desire of ne of those who are demanding Health Insurance most loudly, is just this — free dical care. And not yet, to our knowledge, has any governmental body been willing to y a fair figure for medical care. The figures quoted from Saskatchewan, for instance, nnot possibly provide even fairly good service. And our experience in British Columbia ve shown us that unless there is to be a complete change of attitude on the part of e planners of a Health Insurance scheme, we shall have to be on our guard against e introduction of a cheap plan which will not provide the service that should be ailable. For medical service is a commodity like anything else that one has to buy, d has its unit costs—so much service, so much cost. These unit costs are pretty well own by now, and are available to anyone who wants to find out the facts. We cannot, en if we wanted to, resist the ever increasing demand for a plan whereby everyone in e community can be assured of proper medical care when he needs it—but we can and ust insist on certain things. The first is, that the scheme adopted must provide real d adequate medical care, and not merely a sham. The second is, that it must include l those who need it, and not merely those who can afford to pay for it. The third is at it must be tied up with a real and adequate scheme of preventive medicine, which one will give real relief to the community from the cost of sickness, by lessening its

incidence. There are other considerations, but the last one, and one that is natura of great importance to us, is that payment must be adequate for the work done, a must be in accord with present-day conditions of medical work—whether payment made by panel, or according to a scale of fees or otherwise. We must not be asked provide out of our own pocket half the cost of the scheme, as was done before.

During the controversy we had some years ago, we were asked, on more than o occasion, to give the Health Insurance Plan, to which we objected, a trial. It was su gested that we might try it for a year or so, and if it didn't work, we could cor back and ask to have it modified. There was absolutely no support for this on our sic and indeed we have only to look at Great Britain to see how fatal such a course wou have been. Our sympathies must surely be with our colleagues in that unfortuna country, and we must all hope that they will be able to find a way out of their ve difficult and unsatisfactory situation.

LIBRARY NOTES

RECENT ACCESSIONS—

The Clinical Examination of the Nervous System, 1947, 8th ed., by G. H. Monrac Krohn.

Transactions of the Association of American Physicians, 1947.

Medical Clinics of North America, Symposium on Endocrinology, Chicago Numbe January, 1948.

Annals of the Barber-Surgeons, 1890. (Gift of Dr. William T. Barrett.)

IMPROVEMENTS IN LIBRARY

Rearrangement of Books.

A complete rearrangement of the books and bound journals in the Stack Room ha been completed recently, and it is hoped that it will prove to be more satisfactory tha heretofore.

All text-books and monographs have been brought forward to the front shelves where they will be more accessible. They are, of course, still arranged according to th Boston Medical Library classification. New signs will be set up as guides in locating th various subjects.

The bound journals are now arranged in alphabetical order *by title*, and the unbound journals are also in alphabetical order by title, on the back shelf.

Lighting

A special type of flood lamp is to be installed in the stack rooms. These provide much better lighting and show up the lower shelves to advantage.

Two new floor lamps, of the tri-lite variety will be placed in the Reading Room, as it was felt that addiional light was needed there, as well.

ANNOUNCEMENT—LIMITATION OF BOOK LOANS

The Library Committee wishes to announce that because of greatly increased demands for book loans, a list of books to be designated as "Standard Texts," will be restricted to a twenty-four hour loan period, with the privilege of renewal for a further twenty-four hours if there have been no prior requests. Following is a list of books to be so restricted:

MEDICINE

BECKMAN—Treatment in General Practice.
BOCKUS—Gastro-enterology.
CECIL—Textbook of Medicine.
CHRISTIAN'S—Osler's Principles and Practice of Medicine.
COMROE—Arthritis and Allied Conditions.
CUSHNEY'S—Pharmacology and Therapeutics.
DUNCAN—Diseases of Metabolism.
JOSLIN—Diabetes Mellitus.
KRACKE—Diseases of the Blood.
LEVINE—Clinical Heart Disease.
TAYLOR'S—Medical Jurisprudence.
WINTROBE—Clinical Haematology.

DERMATOLOGY

SUTTON & SUTTON—Textbook of Dermatology.

NEUROLOGY N *PSYCHIATRY*

BRAIN—Diseases of the Nervous System.
HENDERSON & GILLESPIE—A textbook of Psychiatry.
KINNEAR WILSON—Neurology.
WECHSLER—Textbook of Clinical Neurology.

ANATOMY, PHYSIOLOGY, PATHOLOGY

BEST & TAYLOR'S—Physiological Basis of Medical Practice.
BOYD'S—Pathology of Internal Diseases.
BOYD'S—Surgical Pathology.
CUNNINGHAM'S—Text-Book of Anatomy.
GRAY'S—Text-Book of Anatomy.

LABORATORY DIAGNOSIS, ETC.

KOLMER'S—Clinical Diagnosis by Laboratory Examination.
TODD & SANFORD—Clinical Diagnosis by Laboratory Methods.

SURGERY

CALLENDAR—Surgical Anatomy.
CHRISTOPHER—Textbook of Surgery.
THOREK—Surgical Technique.
WATSON-JONES—Fractures and Joint Injuries.

EYE, EAR, NOSE & THROAT

ADLER'S—Gifford's Textbook of Ophthalmology.
BALLENGER'S—Diseases of the Nose, Throat & Ear.
DUKE-ELDER'S—Textbook of Ophthalmology.
WILMER'S—Atlas Fundus Oculi.

OBSTETRICS & GYNECOLOGY

CROSSEN & CROSSEN—Diseases of Women.
CROSSEN & CROSSEN—Operative Gynecology.
CURTIS—Obstetrics and Gynecology (3 volumes).
BERKLEY & BONNEY—Gynecological Surgery.
DE LEE—Practice of Obstetrics.

NOVAK—Textbook of Gynecology.
NOVAK—Gynecology & Obstetrical Pathology.
TE LINDE—Gynecological Surgery.
TITUS—Management of Obstetrical Difficulties.

BOOKS NOT LOANED

BRENNEMAN'S—System of Pediatrics.
FRENCH'S—Differential Diagnosis.
NELSON'S—Loose Leaf System.
OXFORD MEDICINE.

BOOK REVIEW — PSYCHOSURGERY

By WALTER FREEMAN and JAMES W. WATTS
Published by Charles C. Thomas, 1942.

The authors are pioneers in the major advance made in physical methods of treatment in Psychiatry since electro-shock. Their book is the first text on prefrontal lobotomy for disabling psychoneuroses and psychoses of functional origin and serves both to introduce the subject and to be a handbook for the selection, operation and after care of patients coming to psychosurgery. There are five sections, commencing with a historical introduction and following with the physiological and pathological evidence for our knowledge of frontal lobe functions, clinical observations on prefrontal lobotomy and its relation to mental disorder and concluding with theories of psychopathology arising out of the concepts of the procedure.

What vagotomy is to internal medicine, lobotomy is to psychiatry. Several hundred cases have been operated by various workers since this volume was published and in the main the author's conclusions have been borne out. Sectioning all four quadrants in both lobes remains the operation of choice. The chief indication for operation is pathological emotional tension shown as persistent anxiety, its equivalent of obsessions and compulsions or its projected counterparts of auditory hallucinations and persecutory delusions when they dominate behaviour. In psychosis results vary directly with adequate emotional responses, periodicity of attacks and the effort to adjust shown.

It is a permanent procedure producing no measurable loss of intelligence but diminished self-consciousness, perfectionism, foresight and ambition.

COLLEGE OF PHYSICIANS & SURGEONS

NOTICE

LOCUMS TENENS

Last year there were few doctors available to do locums and, in some cases, doctors were unable to obtain a substitute and had to do without a holiday.

It is hoped that there will be more men available for short term locums this year and, in fact, a few men have already indicated that they will be available.

If any doctors have already made their plans and require a locum for any period during the coming summer months, will they please communicate with the undersigned as early as convenient.

F. L. WHITEHEAD, M.D.,
Evecutive Secretary,
College of Physicians & Surgeons.

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THE PROBLEM OF DIZZINESS

By DR. LAURENCE SELLING

(Read before Vancouver Medical Association, January 6, 1948)

The subject of Dr. Selling's paper was "Dizziness." Unfortunately, he spoke fror notes, and not a written paper, which would have not only greatly lightened our burder but would have been of far greater value to our readers.

Dr. Selling is evidently a born teacher, and has, by assiduous practice as lecture: developed his natural talent to a very high degree of excellence. He speaks clearly an concisely, and tabulates as he goes, has no asides, and no disturbing excursions dow tempting, but confusing side paths. A clearer picture of what is a very difficult subjec and a monstant trial to all practitioner of medicine, could hardly have been given. Th following notes are necessarily rather scrappy, but contain, we think, the gist of what D Selling told his audience, which listened with keen attention from beginning to the en of his address.

One probably hardly realises, Dr. Selling began, how frequently dizziness appea on the list of complaints made by patients visiting doctor's offices. A large percentag of our daily run of patients lists dizziness as one of their complaints—often as a mino complaint, but in a large number their prime, sometimes their only complaint.

It is of extreme importance, in the evaluation of the complaint of dizziness, t work out a rational method of approach, along systematic lines, to the problem, with view to diagnosing its nature and cause.

Dizziness the speaker defined as "a disturbed relation to space." It may be of dif ferent forms, ranging from a mere sense of uncertainty or insecurity, with giddiness weakness and a feeling of blankness, to the whirling, turning sensations of vertigo, o varying intensity, with acute nausea, vomiting, and intense misery.

Many varying sensations are associated with giddiness, and there is hardly a part o the body that may not be concerned with dizziness. Accordingly, unless one can im mediately locate the causative lesion, one must be prepared to make a very exhaustiv phyical examination.

Thus *the eyes* are frequently the source of dizziness. The *proprioceptive system,* th *statikinetic system,* the *cerebellum,* and lastly the cerebrum itself must, if necessary all receive a careful searching, to determine the cause of the dizziness.

We must first get an accurate description from the patient of his exact sensation their period, their intensity, etc.

If there is true vertigo, with whirling or rotatory sensations, the lesion can be con fined to a relatively small part of the body. If more vague, less possible to localise, w must examine the whole body.

Dr. Selling reviewed the main areas as follows:

1. *The eye.* We know that looking down from a height causes dizziness. Errors o refraction, muscle imbalance, mild glaucoma, will all cause dizziness. So a carefu ophathalmological examination must be made.

2. *The proprio-ceptive system* must be carefully checked. We all know the un steadiness and dizziness of the tabetic with his loss of muscle sense, his inability to know where he is—and, too, the pernicious anaemia case, with its tendency to postero-latera lesions of the cord; the loss of vibration sense—all these lead to incoordination.

3. *The cerebellum*—the functions of this are well known in their relation to th stability of the individual, and lesions here must be excluded.

Lastly 4. *The brain.* A tremendous variety of things affecting the brain will caus dizziness. And among the first of these Dr. Selling placed *cerebral anoxia.* This ma be due to arterio-sclerosis, with its curtailment of the cerebral blood-supply—hypertensive and cardio-vascular disease, vasospasm, all these may cause intermittent or paroxysmal anoxia, and lead to dizziness.

Anaemia of any variety may give rise to dizziness—e.g. the marked anaemia follow- ; severe haemorrhages, such as follow duodenal haemorrhage, etc. The dizziness here easily understood, but it must be remembered too that blood dyscrasias, even poly- thaemia, may impair the blood-supply of the brain, to produce dizziness.

Infections that attack the brain—the meningitides, encephalitis, syphilis, etc., will give rise to dizziness.

In all these brain conditions, however, the dizziness is merely one among many ıtures of the whole. It is overshadowed by other symptoms and signs, and is rela- ely minor, even as a complaint. In *tumour,* for instance, unless the site of the tumour, . cerebello-pontine, or cerebellar, predetermines acute dizziness of an aggravated ture, dizziness is a minor, often unimportant, symptom.

Trauma too, with its disturbance of the brain, frequently multiple haemorrhages, ll produce a degree of dizziness—but generally of a minor degree, and tending to appear as the condition improves.

But it is when one comes to the *compensation neurosis* following a head injury, ıt one really has complaints of dizziness, far and away more than where there is lly organic damage.

Dr. Selling felt that in practically every case of compensation neurosis, dizziness complained of—there is a complaint of intense headache and sensitiveness located at e site of the injury. Here th dizziness is due not to organic but to psychogenic uses. He knows of no systematised criteria by which to distinguish the real from e imagined dizziness, and wishes he did. But one suggestive feature in the examination all these people is that they react immediately to suggestion and agree immediately th any suggested cause of the dizziness. "Does walking bring it on?" "Oh yes, im- ediately, doctor." "Is it worse after meals?" "Always, doctor," and so on. This is ıe in any neurosis, also.

A group of conditions which produce symptoms due to *anoxia,* more or less tem- rary and paroxysmal.

Paroxysmal tachycardia at the onset of the attack, frequently dizziness is the first mplaint.

Aortic stenosis—heart block—partial Stokes—Adams syndrome—carotid sinus sensi- ity with its dizziness and syncope.

Postural hypotension—sudden drops in blood pressure on rising quickly from a rizontal position.

These of course all give rise to anoxia of the brain, and dizziness accompanies them, also in ordinary fainting or syncope, under strong emotion, in a warm room, etc.

A group associated with *endocrine disorders*

Tetany } In these frequently dizziness is marked and is the most trying
Hyperinsulinism } symptom.

Adrenal tumour

A very important clinical entity, as a diagnostic problem where dizziness is con- rn, is *petit-mal* epileptic attacks in children. It is amazing, he said, how often a ild complains of dizziness. This dizziness is paroxysmal, attacks occurring sometimes eeks or months apart—accompanied with sensations of fear.

The parents come in saying that their child keeps having attacks of dizziness. One ust keep petit-mal in mind, especially since tridione, a new drug, gives spectacular sults in this condition.

Psychoneurotic. This is the largest group of all, and as with compensation neuroses, e cause and manifestations of dizziness are protean and conform to no pattern.

Dr. Selling then turned to *Vertigo*—here we have a very different situation. Verti- is sharply distinguished from other forms of dizziness by the systematised movement turning or rotatory sensation. This the patient may feel as a turning or whirling himself or his environment. With his eyes closed, he feels himself turning, when they e open, everything near him is flying around him.

Here the area affected is sharply limited to a certain definite area of the body, the *ıtikinetic* system, which includes

The vestibule, and vestibular branch of the 8th nerve
The labyrinth
The brain stem.

Of these the labyrinth is the periphery, the brain stem and the vestibular nerve, the centre. The vestibular nuclus is also frequently involved.

We must try and locate the exact site. The most important thing here is whether the lesion is in the periphery, i.e. the labyrinth, or in the brain stem.

The patient who is merely dizzy has no objective signs—merely the subjective symptoms of dizziness. The patient with vertigo is apt to have *one* objective sign, i.e. *nystagmus*. When this appears, it means that the lesion is somewhere in the area mentioned above.

Nystagmus (true nystagmus) is a quick movement of the eyes in one direction, slow in the other.

When the quick movement is to the right, it is called "right nystagmus"; similarly "left" when in the other direction. We may also have *vertical* nystagmus, and *diagonal* nystagmus.

A warning note here is that so-called physiological nystagmus may be produced where there is no lesion present—by having the patient look far in one direction, i.e. extreme turning of eye to on dirction.

To elicit nystagmus—have patient look straight ahead into distance, staring out ahead; then have him focus his eyes on a near object. The staring ahead will elicit it and keep it going; focussing his eyes on an object stops it.

Other methods are used to elicit it; e.g. the placing of a double convex lens in front of the eye—use of the ophthalmoscope, directing light into the eye—quickly placing patient on his back and having him look up at the ceiling.

There is one type of nystagmus—"oscillatory nystagmus," which has nothing to do with vertigo. This is not a quick movement followed by a slow—but a continual oscillation at an even rate, present always in the patient—it is often occupational in origin, e.g. in miners, and men who work for long periods in the dark; sometimes congenital.

Having observed the nystagmus defined previously—does this indicate a lesion of the labyrinth or of the brain stem?

Some types—horizontal or rotatory nystagmus—may indicate a lesion in either place.

The vertical type is almost always indicative of a lesion in the brain stem; the diagonal type always.

A second point has to do with the anatomy of the stati-kinetic system.

In considering the periphery, i.e. the labyrinth, we have to remember that this is very close to the cochlea, or auditory sense-organ—hence disturbance of the labyrinth is practically always associated with disturbances of hearing, tinnitus, etc. If these are present, the labyrinth (the periphery) is more strongly indicated.

As regards the periphery, we must consider the ear as a cause of vertigo, since disturbances here may set up irritation or trouble in the adjacent labyrinth.

Cerumen, a foreign body in the ear, may cause vertigo in this way—blocking or inflammatory processes of the Eustachian tube; suppuration and its end results, e.g. cholesteatoma or fistula.

Hence a thorough examination by a specialist may be necessary, and should always be resorted to if there is any doubt.

We come now to *toxic labyrinthitis*: the commonest cause of vertigo by far, in Dr. Selling's opinion.

The sources of such toxaemia are legion.

1. *Drugs*—Quinine and the salicylates are two classical examples: may produce tinnitus, as we all know, and by extension, vertigo—by its effect on the labyrinth.

2. *Infections*—Upper respiratory infections—inflammation of tonsils, etc., are probably the commonest cause of toxic labyrinthitis.

Patients are extremely miserable with this; they have vertigo, vomiting, and nausea. Frequently they are badly frightened; everything is going round, and they are

vomiting. One must remember that most cases of toxic labyrinthitis are self-limited—last only a few days; but one must reassure the patient and restore his self-possession, by telling him this, giving him sedatives, etc. Dr. Selling finds placebos of considerable value here, since the condition is self-limited, and clears up with the disappearance of the cause. This vertigo, (toxic labyrinthitis) is more or less a constant phenomenon while it lasts—not intermittent as in Meniere's disease, which is episodic and recurring, at more or less long intervals.

There are other causes of vertigo.

Cerebello-pontine angle tumour. This is rare (9% of all brain tumours). Very rarely is the vertigo here intense, and rarely is it a prominent symptom. Other things help to make the diagnosis.

There is a growing mass here compressing the eighth nerve and its nucleus—and we get increasing deafness—tinnitus—loss of the corneal reflex—especially with the patient lying on back. Then the seventh nerve is involved, and we have drooping of the face and facial paralysis. As the cerebellum is compressed, unsteadiness becomes increasingly marked.

Vascular lesions. In arterio-sclerosis, the vestibular artery may be involved, and give rise to dizziness, tinnitus, deafness, etc. But in a patient with arterio-sclerosis who begins to have dizziness, we must not neglect to hunt for symptoms of toxic labyrinthitis.

Haemorrhage into labyrinth, either from arterio-sclerosis or as an episode in a blood dyscrasia, gives a most dramatic picture. Suddenly, without warning, intense vertigo appears with nausea, vomiting, whirling, terrific roaring in ears. The diagnosis is easy to make, and the course is typical. Within three weeks, symptoms tend to subside, as the death of the nerve-endings in the labyrinth removes them—the other labyrinth takes over, and the patient improves greatly. Tinnitus and loss of hearing persist, on account of the involvement of the adjacent cochlea.

As regards the nerve trunk—here the nerve to the labyrinth and ear run together, and symptoms run *pari passu*. The meningitides here are a common cause of trouble. Of course, in this case, the meningitis causes more concern than the vertigo, and is of far greater importance.

The nuclei. The nerve tracts from the vestibular nucleus run to the cerebellum, the brain stem, the cerebrum.

Many of the scleroses: posterior lateral sclerosis, multiple (disseminated) scleroses, may give rise to lesions in this area, especially in the tracts of the posterior bundle. Lesions may be multiple and confusing, since as one recovers, another appears.

Epidemic encephalo-myelitis

Thromboses

Tumours of the cerebellum, by involving terminal (cerebellar) endings of the vestibular nerve. All these may give rise to vertigo—but (1) all these are rare (2) other features of them, much more prominent and much more important, than the degree of vertigo present, give the clues necessary for a differential diagnosis.

It is not so terribly hard to limit the field, really, if one remembers

1. that true vertigo can *practically* always be limited to the area of the statikinetic system
2. that toxic labyrinthitis is by far the commonest cause of it.
3. that infections of the upper respiratory type are the commonest causes of toxic labyrinthitis.

Syphilis, meningitis, etc., are often causes, but are detected anyway by other means, and the vertigo here is quite secondary. It is the vertigo that appears without reference to any major systemic condition that gives us the trouble.

Meniere's disease. This is a condition characterized by sudden paroxysmal attacks of intense vertigo with nausea and vomiting. These attacks may be severe, even cataclysmic—but they have features which are characteristic and diagnostic.

They are episodic, appear suddenly, last less than forty-eight hours, generally only a few hours—and disappear, to leave the patient absolutely free of any symptoms, no

matter how severe the attack was. Intervals between attacks may be months or years.

There is usually impairment of hearing; this is less marked between attacks.

The cause is unknown—but the condition appears to be an endo-lymphatic hydrops, and oedema of the cochlea and labyrinth.

There is no definite treatment. Nicotinic acid gives relief in some cases, and has been used—prostigmin too, and even histamine, but as the attack is not of long duration, evaluation of these remedies is difficult.

Salt restriction with administration of ammonium chloride is of value.

Doyen's operation for permanent relief consists of section of the vestibular partion of the eighth nerve.

A more modern operation now used, consists of trephining into the labyrinth, and draining off the fluid in it. This kills the labyrinth, and within three weeks the other labyrinth assumes the duties of the dead labyrinth.

Streptomycin has been tried, on account of its capacity to impair hearing, and so affect the labyrinth by extension. There there is no certainty as to how far we may obtain the desired labyrinthine impairment without permanent damage to hearing, and this method requires a good deal of study before it can be depended upon at all.

NOTICE

RELIEF ADMINISTRATION

It is necessary that the forms for all Social Assistance cases, including Old Age Pensioners and Mothers' Allowance cases, be completed in full as the information given is the basis on which payment is made.

Accounts must be rendered before the 5th of the month following treatment. Funds are received and disbursed monthly and accounts that are substituted after the percentage is set by the Committee cannot be paid.

PRINCE RUPERT MEDICAL ASSOCIATION

The first clinical meeting of the year was held at Miller Bay Hospital on February 3rd, 1948. Dr. J. D. Galbraith presented a short paper on the present status of streptomycin therapy in tuberculosis.

The following officers were elected for the ensuing year:

President ..... Dr. J. D. Galbraith

Secretary-Treasurer ..... Dr. A. W. Large

Representative to the Prince Rupert Hospital Board ..... Dr. W. S. Kergin

Representative to the Board of Directors of The British Columbia Medical Association ..... Dr. L. W. Kergin

British Columbia Medical Association

(Canadian Medical Association, British Columbia Division)

President ..... Dr. Lavell H. Leeson
President-elect ..... Dr. Frank Bryant
Vice-President ..... Dr. W. Laishley
Honorary Secretary-Treasurer ..... Dr. J. C. Thomas
Immediate Past President ..... Dr. Ethlyn Trapp
Ex. Secretary ..... Dr. F. S. Whitehead

EDITOR'S NOTE:

So far as can be ascertained at this time, the only changes which have been authorized by the Income Tax Department are:

(a) an increase in the ceiling figures of the cost of a motor car to $2,500.00 effective January 1st, 1947.

(b) 7 cents a mile for mileage covered in the performance of professional duties instead of 4½ cents.

There may be some further changes which, if authorized, will appear in the daily press.

With the exception of the items given above, the deductions allowed and the manner of rendering Income Tax returns by doctors are the same as was published in the February, 1947, Bulletin, but the whole article with the alterations is reproduced herewith for easy reference.

DOMINION INCOME TAX RETURNS BY MEMBERS OF THE MEDICAL PROFESSION

As a mater of guidance to the medical profession and to bring about a greater uniformity in the data to be furnished to the Income Tax Division of the Dept. of National Revenue in the annual Income Tax Return to be field, the following matters are set out:

Income

1. There should be maintained by the doctor an accurate record of income received, both as fees from his profession and by way of investment income. The record should be clear and capable of being readily checked against the return filed. It may be maintained on cards or in books kept for the purpose.

Expenses

2. Under the heading of expenses the following accounts should be maintained and records kept available for checking purposes in support of charges made:
   (a) Medical, surgical and like supplies.
   (b) Office help, nurse, maid and bookkeeper; laundry and malpractice insurance premiums. (It is to be noted that the Income War Tax Act does not allow as a deduction a salary paid by a husband to a wife or vice versa. Such amount, if paid, is to be added back to the income):
   (c) Telephone expenses:
   (d) Assistant's fees:
   The names and addresses of the assistants to whom fees are paid should be furnished. This information is to be given each year on Income Tax form known as Form T.4 obtainable from the Inspector of Income Tax.

(e) Rentals paid:
The name and address of the owner (preferably) or agent of the rented premises should be furnished (See (J)).

(f) Postage and stationery:

(g) Depreciation on medical equipment:
The following rates will be allowed provided the total depreciation already charged off has not already extinguished the asset value:
Instruments—instruments costing $50 or under may be taken as an expense and charged off in the year of purchase.
Instruments costing over $50 are not to be charged off as an expense in the year of purchase but are to be capitalized and charged off rateably over the estimated life of the instrument at depreciation rates of 15 per cent to 25 per cent, as may be determined between the practitioner and the Division according to the character of the instrument, but whatever rate is determined upon will be consistently adhered to:
Office furniture and fixtures—10 per cent per annum.
Library—The cost of new books will be allowed as a charge.

(h) Depreciation on motor cars on cost:
Twenty per cent 1st year.
Twenty per cent 2nd year.
Twenty per cent 3rd year.
Twenty per cent 4th year.
Twenty per cent 5th year.
The allowance is restricted to the car used in professional practice and does not apply to cars for personal use.
Effective January 1st, 1947, depreciation on motor cars used in professional practice may be claimed on cars costing up to a maximum of $2,500.00. The effect of this regulation is to raise the ceiling on depreciation from the former figure of $1,800.00.

(i) Automobile expense; (one car)
This account will include cost of license, oil, grease, insurance, washing, garage charges and repairs.
Alternative to (h) and (i) for 1940 and subsequent years—
Effective January 1st, 1947, in lieu o fall other expenses connected with the operation of a motor car, including depreciation, a doctor may be allowed to charge 7 cents a mile for mileage covered in the performance of professional duties. Where the car is not used solely for the purpose of earning income, the maximum mileage which will be admitted as pertinent to the earning of income will be 75½ of the total mileage for the year under consideration.
For 1940 and subsequent years where a chauffeur is employed, partly for business and partly for private purposes, only such proportion of the remuneration of the chauffeur shall be allowed as pertains to the earning of income.

(j) Proportional expenses of doctors practising from their residence—

(a) Owned by the doctor:
Where a doctor practices from a house which he owns and as well resides, a proportionate allowance of house expenses will be given for the study, laboratory, office and waiting room space, on the basis that this space bears to the total space of the residence. The charges cover taxes, light, address of mortgagee to be stated):

(b) rented by the doctor:
The rent only will be apportioned inasmuch as the owner of the premises takes care of all other expenses.
The above allowance will not exceed one-third of the total house expenses

or rental unless it can be shown that a greater allowance should be made for professional purposes.

(k) Sundry expenses (not otherwise classified)—The expenses charged to this account should be capable of analysis and supported by records.
Claims for donations paid to charitable organizations will be allowed up to 10 per cent of the net income upon submission of receipts to the Inspector of Income Tax. This is provided for in the Act.
The annual dues paid to governing bodies under which authority to practice is issued and membership association fees not exceeding $100, to be recorded on the return, will be admitted as a charge. The cost of attending post-graduate courses or medical conventions will not be allowed.

(l) Carrying charges:
The charges for interest paid on money borrowed against securities pledged as collateral may only be charged against the income from investments and not against professional income.

(m) Business tax will be allowed as an expense, but Dominion, Provincial or Municipal income tax will not be allowed.

Professional Men Under Salary Contract

3. It has been held by the Courts that a salary is "net" for Income Tax purposes. The salary of a Doctor is therefore taxable in full without allowances for automobile expenses, annual medical dues, and other like expenses. If the contract with his employer provides that such expenses are payable by the employer, they will be allowed as an expense to the employer in addition to the salary paid to the assistant.

THE BRITISH COLUMBIA MEDICAL ASSOCIATION

A meeting of the Executive Committee was held on January 29th, 1948. This was a special meeting to appoint representatives from the B. C. Division to General Council of the Canadian Medical Association. Our Division is entitled to nine seats on General Council in addition to seats for the President ad Secretaries.

Several other matters were discussed, the most important being the policy to be adopted in relation to the formation of the various Specialist Societies in British Columbia.

SPECIALISTS' SOCIETIES

Since the Board of Directors' meeting which was reported in the December issue of the Bulletin a great deal of discussion has taken place regarding these societies. Some information on the set-up of national specialist organizations has been obtained and more is awaited.

The doctors who become members of a specialist society are, also, members of The British Columbia Medical Association. Many doctors feel that the time has, perhaps, arrived when we should seriously consider amending our Constitution to provide for the setting up of sections, chiefly on a clinical basis, but with provision for the consideration of business matters affecting that particular specialty.

From the financial side it is felt that some arrangement could be worked out whereby doctors would not be put to extra expense in feeling that they had to join their own section or society.

The Chairman of the Committee on Constitution and By-Laws has been asked to consider the amendments which would be necessary to the Constitution and By-Laws of The British Columbia Medical Association to include the specialists' societies already formed, and those which may form in the future.

Observations on the specialist societies already set up are interesting and some of these are presented here.

(a) Any society representing a small number of the doctors of British Columbia can have very little, if any, influence in Government circles.

(b) If it can be arranged for specialists' groups which desire to do so to organize themselves officially into groups within the framework of The British Columbia Medical Association, one would presume that all the doctors in that specialty would automatically be members of that particular section. There is a danger in the present set-up that only those doctors who feel that they can attend the meetings easily will join in the first place or will keep up their membership. If these societies are to fill any real purpose it is important that they actually represent the considered opinion of all the doctors in British Columbia concerned in that particular group.

(c) The knowledge and clinical experience of such a group should be available to the whole profession on an organized basis, and the section should be responsible for providing suitable lecturers for district meetings, for their part in our Annual Meeting, and for any special meetings which might be held throughout the Province.

(d) If there are too many specialists' societies functioning independently there is a danger that the courses of instruction arranged by each group will conflict one with the other, and in some cases overlap, with the probable result that the main efforts of our whole Association along these lines would, in time, be dissipated.

(e) Should groups of men with the same interests be able to form themselves into groups recognized by The British Columbia Medical Association it would seem reasonable to expect them, in the course of time, to exercise some degree of supervision over the standard of medical practice in their own specialty, and to become sufficiently well informed of problems throughout the Province and elsewhere in Canada which are confronting the profession as a whole, with particular reference to the rapidly increasing proportion of specialists to general practitioners.

(f) Those who have the responsibility thrust upon them of advising specialists whether to come to British Columbia and where to go when they get here would be placed in a much stronger position if specialist sections were well organized and if their Executives felt that they were actually speaking for the doctors of the Province in the opinions they might give. This is an important task at present imposed upon the Executive Secretary alone. The number of inquiries received from doctors in other parts of Canada, Great Britain and many other countries is quite large, and there is a very real danger that this Province would become even more oversaturated with doctors than it is at present unless the correct information on the existing situation is disseminated through the proper channels.

The opinion has been expressed by several doctors whose experience in medical affairs is large and whose opinions are founded on sound observation that we should make every effort to include organized specialist groups within the framework of The British Columbia Medical Association, that we should encourage them in every possible way to develop their knowledge and interest in the general affairs of the practice of medicine as a whole, and that it should be to these bodies that we would turn when we want to know what the actual position is regarding the opportunities available on a long term basis, the standards of specialist practice in our Province, and, most of all, what is required to improve the service given to the public.

The Executive Secretary is obtaining all available information on the specialists' organizations in Canada and the United States and the whole matter will be reviewed at the next meeting of the Board of Directors. Should it be decided to proceed, the whole project will have to be submitted to the next Annual Meeting of The British Columbia Medical Association.

REPORT OF THE MEETING OF THE WORLD MEDICAL ASSOCIATION

By DR. WALLACE WILSON

Herewith is submitted for the information and interest of readers of the "Bulletin" a brief report on the agenda and the main decisions of the First Annual Meeting of the World Medical Association held in Paris, September 17-20, 1947.

At the invitation of the British Medical Association, a preliminary meeting was held in London in September, 1946. It was attended by representative of 32 National Medical Organizations henceforward known as the Founder Member-Associations Committee. This Committee, composed of representatives from ten countries and under the Chairmanship of Dr. T. C. Routley from Canada, was instructed to proceed to draw up a Constitution with its Articles and By-laws and to set the time and place of the First General Assembly. Inside a year the Committee was ready and representatives to the second meeting met in Paris on the morning of September 17.

There were present 125 delegates and observers representing 45 National Associations and, under the Chairmanship of Sir Hugh Lett, President of the British Medical Association, the first part of the meeting took the form of a conference to receive and act on the report of Dr. Routley's Committee.

The report evoked prolonged discussion. The suggested Constitution had been circulated to all national bodies some time previously, and it was evident that many of the delegates had given much thought to both the wording and the content of the Articles and By-laws, and that they were not prepared to accept the recommendations of the Organization Committee in their entirety without full and free discussion. The Chairman wisely and patiently gave each delegate full latitude and while the Constitution as amended did not finally pass the Conference until the afternoon of Thursday, the 18th, it speaks well for the soundness of the work of the Organization Committee that there were comparatively few changes and amendments.

It is important that the aims and objects of the World Medical Association as set down in the adopted Constitution should be known to all medical men. They are as follows:

1. To promote closer ties amongst National Medical Associations and amongst the doctors of the world by personal contact and all other means available.
2. To maintain the honour and protect the interests of the medical profession.
3. To study and report on the professional problems which confront the medical profession.
4. To organize an exchange of information on matters of interest to the medical profession.
5. To establish relations with, and present the views of, the medical profession to the World Health Organization, the United Nations Educational, Scientific and Cultural Organization and other appropriate bodies.
6. To assist all peoples of the world to attain the highest possible level of health.
7. To promote World Peace.

The work of the preliminary conference having been completed in the mid-afternoon of September 18, the following formal declaration was then made:

> "In the City of Paris at 3:40 p.m. on the 18th September, 1947, the World Medical Association came into being."

The first Annual Meeting of the General Assembly then started work. Professor Eugene Marquis (France) was installed as the first President, Dr. Charles Hill (Great Britain) was appointed Acting Honorary Secretary and some of the important decisions made by the Assembly were:

Location of Permanent Headquarters

It was decided that these offices should be somewhere on the North American Continent, the exact location being left to the Council for decision.

Funds

The Treasurer (Dr. Leuch of Switzerland) reported very little money in the treasury, and because of the difficult financial situation facing many of the National Organizations, the prospect of obtaining sufficient monies through member contributions appeared rather remote.

At this point, the American delegation reported that some business men in the United States, who were friends of the American Medical Association, being convinced of the potential value of the World Medical Association to world medicine, health and peace, were willing to make available to the Association an annual income of $50,000.00 for five years, provided the funds, administered by a joint supporting committee of American doctors and laymen, were used for certain specific purposes.

After considerable discussion, the Assembly passed the following resolutions that conformed largely to the suggestions of the American delegation.

1. That the General Assembly accept with gratitude the offer of the friends of the American Medical Association and place on record its deep appreciation of their generosity in making available funds sufficient for the establishment of the World Medical Association on a satisfactory basis.
2. That the funds thus made available be utilized to defray expenditure under the following headings:
   (a) The remuneration and expenses of the Secretary, other officials and clerical staff;
   (b) the rents, rates and other disbursements in connection with the official headquarters;
   (c) the general office expenses of the headquarters office staff;
   (d) the cost of the publication of the Association's official bulletin or journal;
   (e) the travelling expenses of the Council.
3. That the costs of the developments listed above be estimated at not more than $50,000.00 for the first year.
4. That the Council be authorized to act on the Assembly's behalf in appointing the Secretary of the World Medical Association and to make all other staffing arrangements, regional and other.
5. That the Council be instructed to explore the possibility of making arrangements for gifts to the World Medical Association to be made tax-free.
6. That Member-Associations be recommended to consider the formation of World Medical Association Supporting Committees in their several countries.
7. That the Council be authorized to prepare plans of development, to enter into any necessary consultations and to submit its proposals to the General Assmbly.
8. That nothing in these resolutions shall diminish the authority of the General Assembly for the full control of the policy and affairs of the Association as provided in Article 8 of the Constitution.

The Assembly then set the annual subscription for Member Associations at a flat rate of 20 Swiss centimes per member with a minimum of 1,000 and a maximum of 10,000 Swiss francs. For the Canadian Medical Association, this will amount to something between $300.00 and $400.00, and the total subscriptions will amount to approximately $20,000.00.

War Crimes

After a discussion of the motions on the agenda by Denmark and Great Britain and the British memorandum relating to the attitude of the profession to war crimes, and after hearing statements by members of the Assembly and by a French medical victim of war crimes, the Assembly appointed a small committee to formulate a recommendation. The following report of the committee was subsequently adopted by the Assembly:-

(i) That a report on crimes committed since 1933 by doctors and medical organizations in Germany and other countries and on this violation of the medical ethic, be prepared and made available to doctors throughout the world.

(ii) That the World Medical Association solemnly condemns the crimes against human beings committed by certain members of the medical profession such as are described in the British memorandum.

(iii) That every doctor, at the time of receiving his medical degree or diploma, be required to subscribe to the following oath:-

"My first duty, above all other duties, written or unwritten, shall be to care to the best of my ability for any person who is entrusted or entrusts himself to me, to respect his moral liberty, to resist any ill-treatment that may be inflicted on him, and, in this connection, to refuse my consent to any authority that requires me to ill-treat him.

Whether my patient by my friend or my enemy, even in time of war or in internal disturbances, and whatever may be his opinions, his race, his party, his social class, his country or his religion, my treatment and my respect for his human dignity will be unaffected by such factors."

(iv) That the World Medical Association endorse judicial action by which members of the medical profession who shared in war crimes are punished.

(v) That the World Medical Association request the German medical syndicates to make the following public declaration:-

(a) We, members of the German medical syndicate, are aware of the very large number of acts of cruelty committed, both by individuals and collectively, since 1933 in mental hospitals and in concentration camps, and of the violation of the medical ethic. These acts have resulted in the death of some millions of people. A large number of our members have been inmplicated in these acts, either as instigators or as technical agents or as actual perpetrators;

(b) We regret that the organized medical profession in Germany has not made any protest and has been content to ignore these acts, of which it could not have been unaware;

(c) We undertake solemnly to condemn these crimes, to expel from our organization the criminals who have committed them, and to remind all our members of the respect due, not only to life, but to human personality, dignity and liberty.

The Assembly instructed the Council to prepare a report incorporating these resolutions and also to take into consideration the following motion by the Netherlands:

That the Council be instructed to prepare a report on the collaboration of medical practitioners in the preparation of means of warfare.

With the election of Council, the General Assembly decided to hold its 2nd Annual Meeting in Prague in 1948 and then, finding it impossible to complete the agenda in the time allotted, certain items were referred to Council whose composition is as follows:

Ex-officio President: Professor E. Marquis (France)
President-Elect: Dr. J. Stucklich (Czechoslovakia)
Treasurer: Dr. O. Leuch (Switzerland)
Chairman: Dr. T. C. Routley (Canada)
Vice-Chairman: Dr. D. Knutson (Sweden), Dr. L. H. Bauer (U.S.A.), Dr. J. A. Bustamante (Cuba), Dr. P. Cibrie (France), Dr. A. Hartwich (Austria), Dr. P. Z. King (China), Dr. J. A. Pridham (Great Britain), Dr. S. C. Sen (India), Dr. L. G. Tornel (Spain).

Matters Referred to Council

1. The general arrangements for the organization and publication of a bulletin or journal.

2. The preparation of a report on the enquiry into the present position of the medical profession in relation to the state.

3. The motions of Luxembourg supported by Australia, recommending the preparation of a comparative statement on standards of training for the medical profession and conditions of registration, and of a comparative statement on the qualifications of specialists.

4. The following motions by India—
(a) That the Council be requested to study and report on the question of the advertisement of cures and medicines in the lay press.
(b) That the Council be requested to study and report on the question of unqualified and unauthorized medical practice.

Council met for the first time at the close of the Assembly Meeting and, accepting the principle approved by the Assembly of Assistant Secretaries, appointed Dr. Bustamante Secretary of the Pan-American Medical Confederation as Honorary Assistant Secretary for matters pertaining to the Latin-American countries. Earlier in the Assembly Meeting, the Pan-American group had guaranteed all expenses of a Regional Assistant Secretary for their area.

Council has asked Member Associations to make known the coming appointment of a General Secretary so that there may be an opportunity for applicants with suitable credentials to apply.

Council has further decided on New York for the permanent headquarters of the World Medical Association and suitable office space will be provided in the building of the New York Academy of Medicine.

The next Meeting of the Council will, therefore, be held in New York on April 26-29, inclusive. Following this meeting, Members of Council, through the generosity of the American Medical Association, will travel as far west as Minneapolis, visiting the Mayo Clinic and certain university centres.

Now that the World Medical Association has been definitely formed, what of its future? No observer present in Paris could doubt the sincerity of the delegates or their anxiety to see functioning a strong and active association. All believed that such an organization could play an important part in the future of World Medicine, Health and Peace and, thanks to the generosity of its American friends, they saw the Association start off with the stability of its finances secured for some years to come.

But more is needed than money. Above all else is required the active interest and support of every individual of each Member-Association. All members of the Canadian Medical Association should realize that they are now also members of a World Medical Association, that they should be ready to support it and be behind our National Association in the part it will play in the work of both the Council and the Assembly. That the Latin-American countries, for instance, which were not represented at the 1946 meeting in London but which were all present at the Paris meeting, are genuinely prepared to back the World Medical Association, is shown by the facts that not only are they paying all expenses in connection with a Regional Secretary for their own area, but also have invited Dr. Routley, as Chairman of Council, to address the delegates at a state dinner of an important Pan-American meeting to be held in Havana, Cuba, in April next.

The Canadian Medical Association is proud of the work of its General Secretary in this World Medical Association. More than any other delegate, he has provided enthusiasm, optimism and wise counselling and the respect and confidence of Council has been shown in his unanimous election to the position of its first Chairman.

Vancouver General Hospital Section

PERNICIOUS ANAEMIA AND ITS RELATIONSHIP TO CARCINOMA OF THE STOMACH

A review of 203 cases in the Vancouver General Hospital.

By A. W. WALLACE, M.D.

The purpose of this survey was to study the relationship of carcinoma of the stomach to pernicious anaemia as found by the Department of Medicine in the Vancouver General Hospital, and to compare the results obtained with those found by previous investigators.

Procedure:

Cases studied come from three sources.

(1) Hospital admissions from 1940 to 1945 were examined and from these 98 cases were selected. It is to be noted that there were in addition a number of cases found with a diagnosis of pernicious anaemia which had to be discarded from the series because the history and recorded laboratory work did not justify the diagnosis.

(2) Out Patient Department files were examined and 92 additional proven pernicious anæmia cases were found. These were taken from a pernicious anæmia treatment list compiled in 1943 and revised and kept up to date since.

(3) Private physicians were asked to contribute case histories and follow-up reports on pernicious anaemia cases under their care. 13 cases were obtained in this way.

Private physicians under whom the hospital admissions mentioned above were admitted, were written to for specific follow-up notes on their cases.

A total of 203 cases were considered on which the average follow-up was 5 years. 43 cases were lost after a follow-up of a variable number of years, but all of these cases were in poor health when last seen.

A relationship between pernicious anaemia and gastric carcinoma has been suspected for many years and some of the work in this respect is reviewed here. Collins, Gover and Sorn (1) by x-raying at random a large group of people over 40 years of age, concluded that 0.3% of the population over 40, living at any one time would have carcinoma of the stomach. Jenner (2) in 1939 in a study of 181 living pernicious anaemia cases found gastrict carcinoma in 4.4%. Roehring and Eusterman (3) in 1942 in a series of 1,000 living pernicious anæmia cases found 1.6% with gastric carcinoma. Kaplan and Rigler (4) studied reports on 43,021 consecutive autopsies on people over 45 years of age. 293 pernicious anaemia cases were found, of which 36 had carcinoma of the stomach. This was an incidence of 12.3%, which was over three times the incidence in the remainder of the group. Torgerson (5) in a study on causative factors of carcinoma reviewed 106 cases of gastric carcinoma arising in pernicious anæmia cases. He found the site of the malignancy to be significantly more frequent on the greater curvature than in gastric carcinoma generally. He pointed out that this is in support of the theory that gastritis is a precursor of carcinoma, since the gastritis of pernicious anaemia is generally in the region of the fundus glands, rather than the more common gastritis in the pyloric area. Rigler, Kaplan and Fink (6) in reviewing the literature up to June 1945 compared the incidence of carcinoma in the general population to the incidence in pernicious anaemia patients. Their conclusions are summarized in the following table:

From The Department of Medicine, Vancouver General Hospital.

	Living	By Death
Gastric carcinoma in all people over 50	.3%	4%
Gastric carcinoma in pernicious anaemia	1.6%	12%

They pointed out that as pernicious anaemia cases are apparently more susceptible to gastric carcinoma than the general population that it is advisable to x-ray them often in search of this lesion.

In the present series 203 histories of pernicious anaemia cases were examined. These cases were followed for an average of 5 years. From this group 30 deaths were reported and of these 2 died of carcinoma of the stomach. 2 other cases with stomach lesions were found; 1 with a benign polyp which conceivably could have become malignant if it had been left *in situ;* another a malignant polyp which was removed by gastric resection with a nine year apparent cure.

In this group, of the total cases studied, 1.47% had carcinoma of the stomach, while of the deaths 6.77% were due to gastric carcinoma. It is apparent that if we are to detect gastric carcinoma in its earliest stage we must x-ray apparently well people. Since the incidence of carcinoma of the stomach is higher among cases with pernicious anaemia it is obvious that these patients must be x-rayed at regular intervals if carcinoma is to be found. There is difficulty in carrying out this procedure both because of the expense and because of the facilities required.

Conclusions:

This is a report of a relatively small series of cases. The results, however, are not at variance with previously reported work, in that they show a greater incidence of gastric carcinoma in pernicious anaemia cases than that generally reported for people of the same age group.

In pernicious anaemia we apparently have a selected group more susceptible to gastric carcinoma than the general population. It is thus important to be continuously conscious of the possibility of carcinoma in these patients, and if at all possible, even if there are no symptoms, to have periodic stomach x-rays.

Author's Note. This Survey was undertaken at the instigation of Dr. G. F. Strong, to whose help and critical comments the author hereby acknowledges his indebtedness.

Bibliography

1. Collins, S.D., Gover, M., and Sorn, H.F. "Trend and Geographic Variation in Cancer Mortality and Prevalence, with special reference to Gastric Cancer." Journal Nat. Cancer Institute 1:425.1941.
2. Jenner. "Perniciose anamie und Magenkarzinom." Acta med Scandinav 102:529.1939.
3. Roehring, P. C., and Eusterman, G. B. "Association of Pernicious Anaemia and Carcinoma of the Stomach." Archives of Surgery 45:554.1942.
4. Kaplan, N. S., and Rilper, L. G. "Pernicious Anaemia and Carcinoma of the Stomach. Autopsy studies concerning their inter-relationship." Am. J.M. Sc. 209:339.1945.
5. Torgerson, J. "Localization of Gastritis and Gastric Cancer, Especially in Cases of Pernicious Anaemia." Acta Radiol. 25:845-855.1944.
6. Ripler, L. G.., Kaplan, M. D., and Fink, D. L. "Pernicious Anaemia and the Early Diagnosis of Tumors of the Stomach." J.A.M.A. 128:426.1945.

TUBERCULOSIS AND PREGNANCY

By G. F. KINCADE, M.D.

Tuberculosis being a disease of young adults and taking its greatest toll amongst females in the age group from 20 to 40, during the child-bearing period, the complication of pregnancy and tuberculosis is a very common concern. The general practitioner and obstetrical specialist will see this situation arising frequently and in a tuberculosis clinic it is something that is constantly dealt with.

There should be no doubt that in the last decade our views of this subject have almost completely reversed. The present concept is almost directly opposite the former by which almost any person with the diagnosis of tuberculosis would automatically be recommended for interruption of a pregnancy. We have now reached a more modified attitude to this problem and large numbers of women with tuberculosis are bearing healthy children without detriment to themselves and certainly none to their offspring.

In reviewing the literature it will be seen that at the time of Hippocrates and Galen, pregnancy was actually recommended as a treatment for pulmonary tuberculosis. This view prevailed until the middle of the nineteenth century and it was generally believed that the health of a tuberculous woman was improved during pregnancy. Following this period there was a complete change. When faced with the problem of pulmonary tuberculosis and pregnancy, even though the tuberculosis were controlled, therapeutic abortion was the rule. This latter opinion has prevailed almost until the present time and even now there is a minority which holds the same view.

It is difficult to understand how these changes come about, but in medicine we find that the pendulum swings from one extreme to the other and eventually comes to rest somewhere in between. Probably the greatest influence in this changing concept has been the admittedly poor results from therapeutic abortion in tuberculous subjects, and the realization that this measure is not necessarily the lesser of two evils. All too often abortions have been done thinking that the tuberculosis would remain controlled only to find that the disease became reactivated following this procedure. With the notable advances that had been made in the diagnosis and treatment of tuberculosis in the past twenty-five years, it again became necessary to review our position in this matter. During the past ten years considerable attention has been paid to it.

Considering the previously gloomy attitude towards this subject, a review of the literature at the present time will disclose a much more hopeful outlook. There is now a fairly wide literature on the subject of tuberculosis and pregnancy, and the evidence of those who hold that pregnancy need not be harmful with tuberculosis is much greater than the opposite school of thought and much more authoritative. A brief mention of some of the articles appearing in the literature will show that in the experimental field, Burke (1) in 1940 showed that in a comparative group of males and pregnant female rabbits infected with tubercle bacilli, pregnancy had no influence on the progress of the tuberculous infection. Wade (2) in 1942 in a somewhat similar experiment found that pregnancy had no influence on the expectation of life in infected rabbits. In studies of tuberculous women, Jameson (3) at Trudeau Sanatorium showed that of 451 married women who were admitted to that institution there was no difference in death rate from tuberculosis in women whose tuberculosis was related to a full term pregnancy as compared to nulliparae of the same age group and having lesions of a similar extent. Hill (4) in 1928, rveeiwing 349 pregnant tuberculous women compared with 160 tuberculous women not pregnant, concluded that pregnancy had no appreciable bearing on the progress of the disease and that the maternal mortality rate corresponds to that of the non-tuberculous women. Lyman (5) in 1943 made a statistical analysis of 1,818 cases of tuberculous women. He divided them into three groups, namely, 728 married before sanatorium admission, 315 married after discharge, 712 remaining single. From this survey it was shown that the group marrying after treatment for tuberculosis had a prognosis four times better than the group that remained single

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(Read at Staff Clinical Meeting, Vancounver General Hospital, October 9th, 1947.)

and three times better than those who were married before treatment. In the group marrying after discharge from sanatorium, 192 out of the 315 had histories of pregnancy, the average being 2.25 each. From these figures we can apparently conclude that matrimony and child-bearing are by no means out of the question for tuberculous cases provided their disease is properly arrested and that they have a proper understanding of their diease, and a realization of their limitations.

Of those authors in the literature who claim that pregnancy has a deleterious effect on pulmonary tuberculosis, most refer to the harmful effect on uncontrolled tuberculosis. They usually agree that when proper facilities exist and adequate treatment can be undertaken the continuation of pregnancy is no more harmful than the hazards of abortion. Cohen (6) in 1946 in an experience of 177 consecutive pregnancies in tuberculous women states that "the results appear to show that pregnancy and labour rarely harm the pulmonary disease. In the great majority of these tuberculosis women, pregnancy was little more than an important incident in the course of their illness. Quiescent, arrested or recovered pulmonary tuberculosis ran slight risk of harm and for these patients therapeutic abortion would not have been justified. When the pulmonary disease was active, abortion would have been justified only if under proper treatment and supervision favourable progress could not have been anticipated. The crucial circumstance was to decide whether or not the pulmonary disease could be controlled."

From the evidence presented it would then appear that when one is faced with a problem of tuberculosis and pregnancy, certain points must be considered.

The stage of disease. Is it of importance whether the patient is minimal, moderately advanced or far advanced? Not necessarily. The far advanced case which has had treatment and is arrested or apparently cured is much better suited for pregnancy than the minimal case which is active or unstable. However, when we are faced with an active case of tuberculosis, the stage of disease is most important. While a minimal or moderately advanced case might readily be brought under control and pregnancy continued, the far advanced is not likely to and for that reason therapeutic abortion will be indicated.

The chief consideration is always the clinical status of the patient, i.e. the determination of whether the case is active, arrested or apparently cured. If the lesion can be considered arrested and if there are no other medical grounds for interruption, then the pregnancy can be continued without more than the normal hazards of child-bearing. This is always providing conditions can be so arranged that the patient may conduct herself within the same limits of exercise that her tuberculosis will permit. In other words the treatment of a tuberculous lesion is the first objective but the usual regime of pregnancy will impose other restrictions and limitations on her activities. However, this should not mean that a tuberculous patient, who has successfully graduated her activities up to several hours exercise daily or part time work, should again become a bed patient because of pregnancy. Quite the contrary. If her tuberculosis remains controlled during pregnancy and the reaction to pregnancy is normal, there is not much need for restricting her activities, particularly in the first two trimesters. However, in the last trimester we are all inclined to advise a certain amount of restriction.

So much for the case in which the tuberculosis is controlled. What about the active case? If through bed rest or collapse therapy the active case of tuberculosis can be brought under control, there is no indication for therapeutic abortion. If the tuberculosis can be treated, the response to treatment will be much the same as if the pregnancy did not exist. Naturally, the decision as to whether or not treatment will be effective is often difficult and sometimes impossible. The early, soft infiiltrate will usually respond to bed rest. The unilateral disease with cavitation may have pneumothorax but the advanced lesion, with evudative and acute types of disease, are more unpredictable and not likely to be brought under control readily. This is the group in which therapeutic abortion is indicated. Even in this group the picture may eventually change with the advent of streptomycin. This drug has shown promising results in the more acute types of tuberculous lesions but its effect in pregnancy has not been investigated, to my knowledge, nor the possible harmful effects on the foetus known.

The prevailing view-point as to when an interruption of pregnancy should be undertaken is that after the third month of pregnancy, interruption should not be attempted. Up to the end of the third month, the interruption may safely be undertaken by the vaginal route but after that hysterotomy becomes necessary. The consensus is that if an abdominal operation is necessary for termination, the continuation of the pregnancy is preferable regardless of the activity of the disease. If therapeutic abortion is clearly indicated it is best that it should be done as early as possible. However, one may temporize in doubtful cases, instituting treatment to determine its effectiveness and delaying the decision regarding interruption as long as can be safely permitted.

Therefore in summarizing we may say that if the case is over three months pregnant therapeutic abortion will not be recommended. Similarly, if the disease is arrested or can be brought under control through treatment, therapeutic abortion will not be recommended. If the pregnancy is under three months duration and the nature of the disease is such that it canot be controlled, therapeutic abortion should be done.

There may be one other justification for interruption of pregnancy in tuberculous women. In those cases with arrested disease having children at short intervals it seems reasonable to expect a deterioration in their general health and a consequent lighting-up of the tuberculosis.

When it has been decided that the active case of tuberculosis may continue with her pregnancy with prospects of the tuberculosis being brought under control, the usual forms of treatment are those of bed rest and pneumothorax, with division of adhesions if indicated. It is usually well to reexpand the lung almost completely during labour so as to prevent the formation of hydrothorax. Operations such as phrenic nerve crushing or avulsion are usually avoided so as not to interfere with the mechanics of labour. Major surgical procedures such as thoracoplasty and pulmonary resection are not undertaken during this period.

It should be pointed out that any form of treatment that is undertaken should be continued for a considerable period of time after the confinement. It is a well known fact that most cases of tuberculosis do well and even improve during pregnancy while the months following confinement produce the breakdowns.

This discussion has mainly been that of pulmonary tuberculosis. In the matter of extra-pulmonary tuberculosis the same princples apply as to whether the disease is controllable during pregnancy. In the case of bone and joint tuberculosis certain mechanical factors must be considered and decided on their own merits.

The problem of sterilization comes up for consideration and it is undoubtedly indicated in unstable cases who have repeated pregnancies. However, it is not always possible in institutional practice due to legal complications.

It is not my intention to dwell on the technical aspects of labour, but merely to point out that in this phase the response of the tuberculous patient is much the same as in the non-tuberculous. Generally speaking the indications for early induction of labour or for Cæsarean section are not influenced by the tuberculous lesion. Similarly the choice of anaesthetics need not be limited because the supposedly harmful effects of ether and chloroform have not been substantiated.

Having dealth with the case of the pregnant woman with tuberculosis, what of the tuberculous patient who is contemplating marriage and pregnancy? Experience has shown that the arrested case after living two years under normal conditions may safely undertake a pregnancy. If these conditions can be met the other factors are laregly economic. For those in whom the disease has not been arrested for a sufficient length of time, pregnancy should be advised against and contraceptive methods should be practised until satisfactory evidence of stability has been shown.

In the event of pregnancy, one of the first questions asked by the mother is usually "Will my baby have tuberculosis?" Congenital tuberculosis is such a rare occurrence that the mother can be assured the child will be born free of tuberculosis and will never contract the disease unless exposed after birth. Even those children born of mothers with far advanced and active disease have been shown to remain healthy with a negative tuberculin test the same as children born of non-tuberculous mothers.

Having concluded that pregnancy is quite compatible with tuberculosis, provided the existence of tuberculosis is known, the majority of cases can be safely guided through pregnancy while only the occasional case will need be interrupted. However, it should be pointed out that probably the greatest danger is to the undiagnosed case of tuberculosis that goes through pregnancy and childbirth without proper treatment for her tuberculosis. This frequently produces a fulminating type of disease discovered several months after confinement and often brought to light only when the infant has succumbed to tuberclous meningitis. In this type of case one mother out of three is dead one year after delivery. For this reason the chest X-ray of pregnant women should be routine procedure. Far too many women fail to have this important investigation and disastrous results occur. One should recommend its wider application both during and after pregnancy.

REFERENCES

(1) Burke, H. E.: Surg., Gynec., Obstet., 71: 615, 1940.
.2) Wade, L. J.: Amer. Rev. Tuberc., 46: 93, 1942.
(3) Jameson, E. M.: Amer. Jour. Obstet. Gynec., 36: 59, 1948.
(5) Hill, A.: Amer. Rev. Tuberc., 17: 113, 1928.
(5) Lyman, D. R.: Yale Journ. Biol. Med., 15: 465, 1943.
(6) Cohen, R. C.: Brit. Journ. Tuberc., 40: 10, 1946.

SYPHILIS IN PREGNANCY

By GEORGE ELLIOT, M.D.

In spite of widespread recognition of the magnitude of the problem of syphilis, the diagnosis, treatment or prevention of prenatal syphilis does not seem to have been sufficiently emphasized.

In British Columbia in the six-year period of 1941-1946 inclusive, there were 1,761 reported new cases of syphilis in females between ages of 15 and 50, which can be considered as the child-bearing group. Studies prove conclusively that in a group of syphilitic women who have never received anti-syphilitic therapy only 17% of known conceptions result in living non-syphilitic children. The remaining 83% will terminate in miscarriages, still births or living children with syphilis. In other words if among above 1,761 syphilitic women there were 1,761 pregnancies and syphilis was not treated in the mother, there would be only 299 healthy non-syphilitic children resulting.

The high incidence of congenital syphilis and the enormous toll which it annually takes is very alarming, and it is particularly alarming because it is so readily preventable.

The prevention of congenital syphilis depends on three principles:

1. The recognition before the 5th month of pregnancy of infection with syphilis in the mother which antedated or coincided with the pregnancy. (This implies the necessity for prenatal examination, including a serologic test for syphilis, in first half of pregnancy.)
2. The recognition of syphilis acquired during pregnancy. (This implies the necessity of repeating serologic test for syphilis at least once during pregnancy, preferably at about the seventh month.)
3. The proper treatment of all expectant mothers found to have a checked positive serologic test for syphilis.

If these principles are applied prenatal syphilis can almost be wiped out.

Manner and Time of Infection of Fetus.

The manner of infection of the fetus in utero and the time during pregnancy at which infection takes places have been the subject of much speculation and somewhat less clinical and experimental observation. Out of these has come the accepted

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fact that paternal transmission of syphilis (i.e. infection of the child from the father without the mother being diseased) does not occur, and the working hypothesis that infection of the fetus rarely, if ever, occurs before the fifth lunar month of gestation.

The actual infection of the fetus is throught to begin with spirochetemia (frequently transient) of the mother, a phenomenon which may occur at any time in patients with syphilis but which varies in frequency, intensity and duration depending on the state of the disease, the presence or absence of previous treatment and (especially with the older infections) other poorly understood factors. In general, however, in the absence of treatment, the more recent the mother's infection with syphilis, the longer, more intense and more frequent the bouts of spirochetemia and, therefore, the greater chance of infection of the fetus.

The organisms reach the fetal circulation from the maternal circulation by way of the placenta during one or more of these bouts of spirochetemia. From the incomplete evidence available, it seems to be possible in some cases for the placenta to present a barrier through which the organisms do not penetrate. There is also some evidence to indicate that the spirochetes may reach the fetal circulation from the maternal circulation through the placenta without causing readily detectable lesions in that organ. In general, however, syphilitic lesions are produced on the maternal side of the placenta by localization there of organisms brought by the maternal circulation. The lesions extend to the fetal side of the placenta, invade the fetal circulation, and infection of the fetus occurs. Finally it may be said without question that whether pre-conceptional or post-conceptional syphilis is in point, diaplacental invasion, especially in latter half of pregnancy, is the habitual route.

The Treatment of Familial and Prenatal Syphilis.
General Principles.

The value of treating the syphilitic pregnant woman to prevent prenatal syphilis, recognized since the middle of the seventeenth century, has never been more conclusively demonstrated than in the last twenty-five years, and if it is possible, even more markedly shown with the introduction of penicillin. Studies conducted in the past half century by prominent physicians, too numerous to enumerate, have shown that from the therapeutic standpoint, syphilis transmitted from parent to offspring is practically a preventable disease. Its prevention rests upon the diagnosis and treatment of syphilis complicating pregnancy.

For more detailed discussion of treatment it seems advisable to discuss first:

(1) the use of arsenicals and heavy metals.
(2) the use of penicillin alone.
(3) the use of both (1) and (2).

Arsenicals and heavy metals

From an examination of some of the massive amount of literature available on this subject, it seems quite definite that better than 90% normal children result when the trivalent arsenicals are used in sufficient amounts. The best results have been obtained when treatment is given both before and during pregnancy, but since the fetus often is not infected until late in term, *it is never too late to begin treatment*. With arsenicals and heavy metals a satisfactory outcome can usually be expected if it is possible to start arsenical therapy by the twentieth week and active treatment is continued until time of delivery.

Stokes (1) Recommended Principles of Treatment, Syphilitic Pregnant Woman:

1. Begin treatment of the syphilitic pregnant woman as soon as the diagnosis is established. A delay of even a few days may mean a syphilitic child.

2. To be effective the drugs must be spirillicidal. Intravenous neoarsphenamine and mapharsen are the drugs of choice. The heavy metals (mercury or bismuth) have relatively much less protective effect for the fetus.

3. Protection of the child is the primary aim of treatment during pregnancy. Maternal syphilis must be treated after delivery.

Author	*Year*	*Cases*	*Treatment given Mother*	*Percentage Normal Children*
Benensohn	1942	789	Neoarsphenamine and Bismuth	93.3
		146	None	60.0
Moseley, Callaway and Sharpe	1940	21	Neoarsphenamine before and during pregnancy	100.0
		66	Neoarsphenamine during pregnancy only	90.9
		17	Neoarsphenamine before pregnancy only	88.2
		56	None	53.6
Halloran	1939	84	More than 10 weekly neoarsphenamine	92.9
		149		
		264	6 to 10 weeks neoarsphenamine	72.4
		16	None	18.8
Cole et al (CCG)	1934	131	Trivalent arsenical and heavy metal begun before fifth month	78.4
			Same as preceding but more than weeks trivalent arsenical	90.7
		39	Same as preceding but begun after fifth month	60.6
		132	Penicillin (aquesous) 1.2 to 4.8 units	96.7
University of Pennslyvania and Johns Hopkins	1944-1946	121		
Bellevue Hospital Rapid Treatment Centre	1944-1947	261	Penicillin (aqueous) 4 M. units	97.0

4. Treat largely with ansenicals during the late months, largely with heavy metal during the early months. The fetus is seldom infected prior to the 20th week.

5. Reduce the initial dose of arsenicals if treatment is begun after the fifth month. The first injection may be 0.2 Gm. of neoarspenamine (or its equivalent); the average dosage for the first three weeks should not exceed 0.3 Gm. for the 150 pound adult.

6. Continuous alternating is preferred to concurrent treatment.

7. After the fifth lunar month the length of the bismuth course should not exceed 4 to 6 weeks lest infection of the fetus result from lack of spirillicide.

8. Treatment should be continuous. No rest interval.

9. Arsenicals should be given for 4 to 6 weeks immediately before delivery.

10. If reactions occur stop treatment and re-evaluate. Do not injure the mother from the overzealous applications of treatment for the unborn child. The average pregnant woman tolerates normal antisphilitic therapy well, but should reactions occur they may be serious and should not be considered lightly.

It would seem that the use of trivalent arsenicals has perhaps one contentious factor: neoarsphenamine is perhaps the drug of choice, although mapharsen is advocated by many authorities; if mapharsen is used it should be given every five days. Intramuscular arsenical preparations (Bismarsen) are not effective; the use of the intensive 5 or 21 day massive arsenic therapy is not advocated owing to risks involved and the excellent results normally obtained with more conservative treatment.

Some difference of opinion is also encountered about the use of an arsenical and bismuth concurrently. It seems that as heavy metals such as bismuth have relatively little

protective effect for the child, such a scheme is unnecessary, especially when use of heavy metal concurrently increases the risk of complication for the mother.

Control of Treatment Reactions.

Anti-syphilitic treatment during pregnancy should be accompanied by more than ordinary prenatal care.

With normal precautions, standard treatment as outlined previously may be given without hesitancy to the pregnant woman. When complications of syphilis occur, such as cardiovascular, treatment of this stage of syphilis takes precedence over the protective treatment for the child. When special types of treatment are indicated such as fever therapy for C.N.S. involvment), these had best be postponed until after the termination of pregnancy, continuing normal protective treatment for child until delivery occurs. Spinal fluid studies should be postponed until after delivery. Tryparsamide should be withheld since its effect on the optic tract of fetus is unknown.

Collateral Aspects of Treatment of Syphilis and Pregnancy.

It seems advisable to discuss a few of the commoner statements relative to syphilis and pregnancy.

(a) It has been advised by some writers that pregnant women be treated on mere suspicion of syphilis. There is no reason to treat a pregnant woman for syphilis unless she is definitely known to have or to have had the disease.

(b) It has been said that the expectant mother should be treated if her husband has syphilis. Since the mother frequently escapes infection even though the father may be syphilitic, and since infection of the fetus occurs *via* placenta and not from seminal fluid there seems no reason to treat a mother merely because her husband is diseased.

(c) It has been said that active syphilis complicating pregnancy may be an indication for inducing abortion. Syphilis in itself is no reason for interference with pregancy.

From the standpoint of the mother, carrying the pregnancy to term may be conceived as a reinforcement of her defence mechanism, and moreover adequate treatment of the mother during pregnancy almost always ensures a healthy child.

(d) It has been said that a woman once syphilitic should be treated through each subsequent pregnancy. Conservative opinion suggests that with our present day knowledge, a syphilitic woman should be treated through every pregnancy regardless of duration of her infection, her serologic status, or the amount or type of antecedent therapy. The only exception is a congenital syphilitic woman, provided previous treatment, adequate to control the activity of congenital infection (not necessarily to reverse the blood serology), has been carried out. If previous treatment has not been adequate, treatment is advised throughout pregnancy, more for the sake of the mother than the child. Third generation syphilis is excessively rare.

(e) That the syphilitic mother should not nurse her infant after delivery. As a rule if the mother has no infectious lesions she may nurse her newborn child. Stokes and associates (1) state they have never seen an exception to this statement. It is necessary, of course, that the mother with active syphilis be receiving treatment for her disease.

The question occasionally arises as to whether anti-syphilitic therapy given to the mother prenatally may ever be harmful to the fetus. In general the amounts of arsenical and heavy metal (and penicillin can be included) which traverse the placental barrier with normal treatment are not injurious to the unborn child.

Use of Penicillin in Syphilis in Pregnancy

The use of penicillin in treatment of syphilis must still be regarded as experimental. However, its use in early syphilis, certain types of neurosyphilis, congenital syphilis and syphilis in pregnancy seems to be established as good therapy, and little doubt exists as to its value.

Penicillin has proven a particularly valuable agent in the prevention of prenatal syphilis .It has fulfilled the requirements for the ideal anti-syphilitic agent better than any drug previously employed.

In a recent series of 261 pregnancies in 259 patients, 95% of the results were non-syphilitic, 1.5% were definitely syphilitic and 3.4% were possibly syphilitic. It is quite apparent from a study of previous remarks and the table that no previous method of anti-syphilitic therapy with arsenicals and heavy metals has yielded such satisfactory results. No severe toxic manifestations have been observed, and this includes no tendency to increase abortion.

Penicillin therapy is of value if instituted as late as the last 8 weeks of pregnancy, and healthy babies will be obtained. With arsenicals and heavy metals one can give similar assurance only when started prior to 16-weeks of pregnancy .

It is not possible to state what the optimal dosage of penicillin is but it is safe to say that a total dosage of less than 2.4M. units of this antibiotic is inadequate. Relapses may occur even when higher dosage is used, and it is thus essential that frequent quantitative serologic tests be done, and any definite rise should demand re-treatment. The decline in quantitative STS in patients treated for latent syphilis is much less marked than following therapy for the early infectious stages. In the Bellevue Hospital Rapid Treatment Centre (2) a quantitative value of 16 Kahn units or higher is an indication for re-treatment unless there is evidence of a preceding rapid decline to this level.

The conclusion of the study recently completed at Bellevue Hospital Rapid Treatment Centre (2) are as follows:

(1) Penicillin in adequate dosage is effective in preventing congenital syphilis. At the present time it is the most satisfactory agent for the treatment of the pregnant syphilitic woman.

(2) A total dosage of less than 2,400,000 units of penicillin alone is not advised. At present Bellevue Hospital is using a total dosage of 4,000,000 units (40,000 units every 3 hours for 100 doses).

(3) Non-syphilitic babies may be obtained regardless of the period of gestation in which penicillin therapy is started.

(4) Frequent observation during the prenatal period is essential to detect evidence of serologic and clinical relapse.

(5) If a relapse occurs during the prenatal period, a healthy baby may be obtained if re-treatment is instituted promptly .

(6) A patient who has responded satisfactorily following previous penicillin therapy need not be re-treated during an ensuing pregnancy if adequate follow-up observation is assured.

(7) Re-treatment is advocated during pregnancy only in those patients who have not shown satisfactory progress.

A word of caution is advanced in use of penicillin in treatment of syphilis in pregnancy. Certainly more of the resultant healthy babies treated with penicillin than with arsenical and bismuth therapy will represent cases of prenatal syphilis which were cured in utero by penicillin given the mother. If this should be so, the possibility of relapse, comparable to relapse seen in acquired type of syphilis, is possible.

Recently a report has been published by the above mentioned authors (3) as to the use of penicillin in oil in treatment of syphilis in pregnancy. The dosage used was 4.8M. units given over 9 days as follows:

1st day 150,000 units
2nd day 450,000 units
3-9 day 600,000 units

These were given as single injections daily at 4 p.m.

The overall results in use of penicillin in oil and beeswax are approximately equivalent to those of aqueous solution. There is, however, some indication that penicillin in oil-beeswax is less effective for symptomatic early syphilis in late pregnancy, if the fetus

is already infected. In this situation it would appear better results can be obtained more uniformly by using aqueous penicillin in hospitalized patients.

Use of Penicillin and Arsenicals and Bismuth in Syphilis in Pregnancy.

In the Division of V.D. Control, Department of Health and Welfare, we have adopted the conservative view point and still feel that penicillin must be regarded as experimental. As a result we treat no types of syphilis with penicillin alone, but always combine it with arsenicals and heavy metal.

Our recommended treatment for syphilis in pregnancy is as follows:

All cases of syphilis in pregnancy, irrespective of previous treatment, be hospitalized for penicillin therapy, i.e. intramuscular injections of 40,000 units every three hours for eight days. This treatment is then followed by regular weekly injections of alternating courses of mapharsen and bismuth. The courses of bismuth after the fifth month of pregnancy should not exceed four consecutive injections and the last six to eight injections before term should be arsenicals. Blood pressure reading and urinalysis are recommended weekly while the patient is receiving arsenotherapy, and hæmoglobin taken every three months. The serology should be followed monthly, and if there is any evidence of a rising titre we would recommend that consultative service be requested with the view to possibly repeating the penicillin course.

If the cerebrospinal fluid has never been taken, and if it is indicated in the routine follow-up of these patients, the Division recommends that advantage be taken of the woman's hospitalization (at delivery) and the spinal tap be performed during this postpartum period rather than in the prenatal period.

It is recommended that a routine Cord Kahn be taken at birth. If this is negative the infant's blood test should be repeated at six weeks and three months of age.

If the Cord Kahn is positive, treatment should *not* be given unless there are confirmatory clinical or x-ray evidence of infection. In many cases the positive Cord Kahn is due to carry over of reagin from the mother. These patients should have repeated quantitative Kahn tests. If the titre is rising the diagnosis is confiermed and treatment should be started. If the titre falls the child should be kept under observation until freedom from infection is established.

Finally in Stokes' own words (1): "Once progress has been made in any community or organization in control of prenatal syphilis, it then becomes an easy matter to expand into a comprehensive programme which will embrace the many public health and social implications of infectious early and symptomatic late syphilis. Within the last few years a veritable wave of premarital and prenatal examination laws have swept the country. The private practitioner, the obstetrician and the pediatrician have been placed in an unparalleled position of responsibility which they will live up to only after they have subjected themselves to a complete reappraisal of their knowledge of the control of syphilis in marriage, in pregnancy and in early infancy."

Bibliography

(1) Stokes, Beerman, Ingraham: Modern Clinical Syphilology, W. B. Saunders Company, Philadelphia and London, 1944.

(2) United States Public Health Services: The Journal of Venereal Disease Information, United States Government Printing Office, Washington, D.C., June, 1947.

(3) United States Public Health Service: The Journal of Venereal Disease Information, United States Government Printing Office, Washington, D.C., August, 1947.

(4) United States Public Health Service: Syphilis in Mother and Child, United States Government Printing Office, Washington, D.C., 1940.

DIABETES COMPLICATED BY PREGNANCY

By W. W. SIMPSON, M.D.

The diabetic female of child bearing age is faced with a number of problems the chief of which are:-

(1) that of becoming pregnant.
(2) of surviving the course of a pregnancy.
(3) of producing living children.
(4) of transmitting the tendency to develop diabetes in her offspring.

Prior to the advent of insulin, sterility in a diabetic woman was a major problem. Few of them conceived and those that did were subject to a high incidence of abortion and miscarriage. Since the discovery of insulin and more recently of protamine zinc insulin, sterility in the diabetic female has not been nearly so common. In fact with good diabetic control the fertility rate of such patients has approached that of the non-diabetic. The cause of sterility is not definitely known but evidence would seem to indicate that it is a hormone imbalance chiefly due to a decrease in pituitary gonodotropins. In uncontrolled diabetes nutritional disturbances may also play an important role.

Maternal Mortality.

The maternal mortality among diabetic pregnancies has shown marked and progressive diminuation in recent years. Not many years ago it amounted to 30%. With modern methods this has been reduced in large series to the order of 0.4-0.8%. This improvement has resulted from better diabetic control in part but largely from the recognition and treatment of hormone imbalance.

Foetal Mortality.

The high incidence of foetal mortality in diabetic pregnancies is still a major problem. Different authorities quote rates in large series as high as 25-60%. Duncan states that the incidence is still six times that of the non-diabetic—and further, that this high figure prevails as well during he five years preceding the onset of diabetes in the mother. If hormone balance is normal throughout pregnancy one can expect a foetal mortality of only 4%. In genral, foetal mortality can be greatly reduced by: strict control of the diabetes; prediction of toxæmia by increased serum prolan levels after the sixth month; treatment of such toxæmia by œstrin and progestin; and emergency deliveries in cases where toxæmia develops.

Abnormalities of Pregnancy When Complicated by Diabetes.

Let us now consider the more important abnormalities of the diabetic mother. White has divided these into maternal, obstetrical, chemical, foetal and placental categories. The maternal abnormalities may be further subdivided into two, namely, vascular disease and hypo-ovarianism. The diabetic shows widespread arteriosclerotic disease many years before the non-diabetic. These changes are diffuse and may involve kidney, coronary vessels, peripheral vessels and those of the retina. Usually the young diabetic woman will show some of these changes after five years duration of her diabetics. Such changes are marked when the disease has been present for fifteen or twenty years, so that the woman who developed diabetes in childhood has widespread vascular disease by the time she has reached marriageable age. After twenty years of diabetes seventy per cent of women show these changes. Hypo-ovarianism manifests itself in amenorrhœa, menorrhagia, metrorraghia, chronic cystic mastitis, and retardation of growth. Diabetic women have normal or high blood values for follicle-stimulating hormone and low urinary levels of 17-ketosteriods. Such findings suggest a failure of gonad and/or adrenal function. The high level of pituitary F.S.H. may be due to failure of suppression by ovarian follicular hormone. The diabetic woman is gynaecologically old before her time. This is perhaps related to associated arteriosclerotic vascular disease. From an

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obstetrical viewpoint the diabetic woman often shows an increased uterine irritability. This may result in contractures throughout pregnancy and lead to early spontaneous rupture of membranes with loss of amniotic fluid but without delivery. Miscarriage is common. The incidence of breech presentation is high. During labor uterine inertia is often encountered.

Among the chemical abnormalities one finds a low renal threshold for glucose. This complicates the control of the diabetes, since overtreatment will result in hypoglycæmia if control is based on urinary findings alone, and under treatment leads to acidosis. There may be carbohydrate deficiency from loss of sugar in the urine, increased demands from the foetus, and glycogen blockage in the tissues. Such carbohydrate deprivation results in increased consumption of body fat with tendency to acidosis. The acidosis causes anorexia and the resulting low food-intake in turn aggravates the deprivation of carbohydrates. The pregnant diabetic is also prone to disturbance of water balance in the direction of water retention. This abnormality leads to abnormal gain in weight, œdema, bydramnios, hydramia and fœtal œdema. The most important chemical abnormality however is imbalance of the sex hormones. White states that this occurs in 80% of cases. The usual findings in such cases are a low excretion of pregnandiol, a low serum oestrin, a high serum chorionic gonadotropin, and disappearance of basophilic cells from the vaginal smear. These changes are thought to be due to a failure of production by the ovary of progesterone and oestrogen and a compensating increase in chorionic gonadotropins.

Fœtal abnormalities are very common. The fœtus tends to be larger than normal, owing to increased fat, œdema, and large size of the visceral organs, (splanchromegaly). There may also be advanced bone development. The heart frequntly shows glycogen infiltration. Jaundice sometimes occurs with normal red blood cell count and no bleeding tendency. Pulmonary atelectasis is found in all fatal cases and in one third of living births. Congenital defects are present in 12% of infants as compared to 1.8% in the non-diabetic .If the mother's diabetes is poorly controlled, islet cell hyperplasia is common in the foetus.

The placenta is usually large but occasionally may be very small. A thickened unbilical cord and placental infarcts are common findings.

The Management of the Pregnant Diabetic.

General Measures.

These include general hygiene and exercise. There should be close co-operation between obstetrician and internist. The patient should be seen every two weeks in the first and every week in the last trimester.

(A) Diet. An adequate diet should contain thirty calories per kilogram body weight and should be increased parallel to gain in weight. Protein should be supplied at the rate of two grams per kilo body weight. The diet should contain a minimum of 200 grams of carbohydrate per day. The remainder of the caloric requirement can be made up in fat. Adequate supply of vitamins A, B, C, D, E, and K, must be given. Calcium need can be fulfilled with one quart of milk per day .Otherwise it may be supplied as calcium lactate or gluconate by mouth.

(B) Insulin. Many authorities advise the routine use of insulin whether or not the patient has needed it previous to pregnancy. There is usually a loss of carbohydrate tolerance and increased insulin requirement in the first trimester. This requirement may be three or four times the dose needed before conception. In general the insulin requirement increases with increase in weight. It should be given in sufficient dosage to maintain normal blood sugar levels.

Management During the First Trimester.

If pernicious vomiting is encountered the patient should be given intravenous glucose and insulin may be necessary. Frequent small feedings every two or three hours may be helpful. The insulin requirement nearly always increases durnig the first trimester.

Management During the Second Trimester.

Having passed the first three months' period one does not usually have further trouble during the second trimester .During this period the insulin and caloric needs often remain at a constant level.

Management During the Third Trimester.

It is in this period that the major problems arise. One finds a great variation in the carbohydrate and total food tolerance and with it therefore a great variation in insulin requirement. If the diabetes has been under good control the insulin requirement increases steadily throughout the third trimester. If diabetic control has been poor there may be a fall in hyperglycæmia and glycosuria owing to compensatory overactivity of fœtal islet tissue. Good control spares the fœtal pancreas and prevents hypoglycæmia in the new-born. Parallel to the increasing need for food and insulin there runs an increasing requirement for vitamin which is proportional to the total metabolism.

If oedema occurs salt restriction is indicated. Sodium bicarbonate is contraindicated. The diet should be high in protein. Laboratory facilities for quantitative estimation of serum and urine sex hormone levels are unfortunately not generally available, but where they are they should be routine. If such procedures are not available substitution hormone therapy may be given according to dosage table suggested by White.

	Daily or every second day.	
Week of Pregnancy	*Prolution*	*Stilboestrol*
20	5 mgm.	5 mgm.
20-24	10	10
24-28	15	15
28-32	20	20
32-36	20	25
36	15-50	30-50

Cæsarean section should be done immediately with onset of signs of toxæmia.

Termination of Pregnancy.

Caesarean Section vs. Spontaneous Delivery.

There is considerable difference of opinion among the experts on this question. Cæsarean section spares the mother of normal labour but also adds a major surgical procedure. Some favour section unless the patient has had diabetes for less than five years and has had a pregnancy which has been normal clinically and chemically. In this case the diabetes *PER SE* is not considered an indication for section. If hormone levels have been done then sponteneous delivery is probably best in those with normal serum prolan values. Spontaneous delivery may be allowed also in those in which serum prolan is reduced to normal by oestrin and progestin therapy. Caesarean section however should always be done in those with failure of hormone control and immediately with onset of signs of toxæmia.

Treatment During Labor and Delivery.

The incidence of ketosis in prolonged labour will be greatly lowered if the patient is routinely given 10-15 grams of carbohydrates per hour during labor T.his may be given by mouth or as 10% glucose in distilled water intravenously. Regular insulin should be given in small doses every four hours according to urine sugar determinations. If delivery is normal sedation should be minimum. Spinal anaesthesia is the anaesthesia of choice. Spinal, caudal, or nitrous-oxide, and episiotomy are advised for the third stage. Following delivery the obese mild case soon gets along without insulin. However if the diabetes was not controlled during pregnancy and the fœtal pancreas was overactive the patient may need more insulin *post partum*. Usually it is wise to give regular insulin two or three times a day after delivery for a few days. A six-hour program of feedings and insulin is an excellent routine. In this way the twenty-four hour feeding is divided into four parts of equal caloric and carbohydrate value and the insulin divided into four equal doses. Intravenous glucose in water should be repeated twice daily for

three days post partum. One hundred grams of carbohydrate in warm liquid by mouth may be given daily and soft diet started by the fourth day.

Post-Partum Complications.

Eclampsia may follow delivery as in the non-diabetic. Similar treatment is advocated pllus control of the diabetes. Eclampsia must be differentiated from hypoglycæmia. Pye lonephritis is treated with sulfadiazine, penicillin, mandelate or streptomycin, depending on the infecting organism. Lactation seldom occurs in the diabetic mother. This may be due to failure of pituitary lactogenic hormone. In the rare instance in which the mother does nurse her baby she may need less insulin while nursing. The lactating mother may be very sensitive to insulin. Since the presence of lactose or lochia in the urine will give false urine sugar tests, the insulin dose must be controlled by frequent blood sugar determinations.

Prognosis of the Child.

The infant born of the diabetic mother faces increased hazards in early life, but if he survives his ultimate outlook is good. Neo-natal mortality in the experience of White in recent years is only 4% as compared to the non-diabetic of 3%. Mortality rates in the first year are now only 5%, th esame as the non-diabetic. The child cannot inherit diabetes from the mother alone. Diabetes is a recessive Mendelian trait and unless the father has diabetes or carries a recessive factor for diabetes the child will not develop the disease.

References

White—Treatment of diabetes mellitus—1946. Joslin et al.
Duncan—Diseases of Metabolism—1947.

LOW BACK PAIN

By F. P. PATTERSON

TABLE I.

Classification of Low Back Pain Excluding Posture, Discs, and Fractures

A. *Extrinsic.*
1. General Infectious—Poliomyelitis, Meningitis, Onset of Infectious Diseases .
2. Genito-Urinary Lesions—Prostate, Cervix.
3. Gastro-Intestinal Lesions—Cancer of Rectum.
4. Senile Osteoporosis.
5. Psychiatric.

B. *Intrinsic.*

I. *Congenital Anomalies*
- (a) Spina Rifida
- (b) Sacralization—Unilateral and Bilateral
- (c) Hemivertebra with Scoliosis
- (d) Congenital Dislocation of the Hip
- (e) Spondylolisthesis

II. *Inyammatory Lesions*
- (a) Pyogenic Osteomyelitis
  1. Acute
  2. Subacute, Insidious Onset
  3. Chronic
- (b) Tuberculosis
- (c) Marie Strumpell Spondylitis
- (d) Fibrositis

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III. *Degenerative Lesions*
(a) Osteoarthritis

IV. *Neoplastic Lesions*
(a) Primary Bone and Spinal Cord Tumours
(b) Secondary

V. *Traumatic*
(a) Contusion
(b) Muscle and Ligament Sprain
(c) Sacro-iliac Strain—Including Pregnancy
(d) Lumbosacral Strain
(e) Aggravation of Pre-existing Conditions.

The portion of this symposium allotted to me deals with low back pain excluding fractures ,intervertebral disc lesions, postural back ache and pain referred to the back from the pelvis.

A classification on an etiological basis if offered. (See Table I.) This is incomplete but will serve the purpose for tonight.

Of foremost importance is the history and examination. This should include first a general history and examination to avoid many errors .It is important to know the type of pain, with its onset, gradual or acute; whether or not preceded by injury and in what manner it is affected by rest, motion, posture, etc.

In the physical examination the patient should be completely undressed. One should note deformity, such as scoliosis, trunk list and tilt of pelvis. Spinal motion in various planes is observed noting how the patient bends as well as the extent. Points of tenderness are of great importance and frequently are the main sign in arriving at a diagnosis. Hamstring spasm, tested by straight leg raising, flexion deformity of the hips causing an increased lumbar lordosis and many other features should be noted. A neurological examination, including reflexes and sensations, is to be included, and rectal or pelvic examination is part of the general physical examination. In the majority of cases x-rays should be made of the spine and pelvis with particular reference to the lumbosacral region.

The classification is as shown and is divided into two main groups. The extrinsic are those which should be ruled out by the general examination. The main factor of diagnostic value is that it is rarely, if ever, that these so-called extrinsic back pains are affected by posture or motion of the body.

Of the intrinsic low back pain group, first are the congenital anomalies:

(a) *Spina Bifida* is mentioned only because of the frequency of its appearance radiologically. It is rarely, if ever, a cause of low back pain.

(b) *Sacralization* of a 5th lumbar vertebra is considered to be evidence of a transitional state in the evolutionary process. This may be unilateral or bilateral. Many think that pain or disability is much more common with the former than the latter. This anomaly is seen quite frequently but is not often a cause of pain. Its presence is a factor predisposing to low back strains. If the lumbosacral region is more stable because of sacralization, the joint between the 4th and 5th may be more unstable. Lesions such as disc protrusions between the 4th and 5th are not uncommon in such a case. If the fusion of the transverse process to the iliac bone is incomplete and at this site sclerosis of bone is seen it is probably indicative of arthritic changes. This may require treatment such as a support in the form of a belt or corset.

(c) *Hemivertebra* is mentioned as it is occasionally seen and is likely to be the cause of a congenital scoliosis.

(d) *Congenital Dislocation of the Hip* may cause pain in the lumbosacral region owing to the increased lumbar lordosis resulting from the flexion deformity of the hip, or from postural change due to a short leg.

(e) *Spondylolisthesis* is a term which indicates a forward slipping of one vertebra on another, due to a defect in the pedicles of the vertebra. It is most commonly seen

at the 5th lumbar. The neural arch remains fixed posteriorly and the body is displaced forward. The defect in the pedicles may be present without displacement and the condition is then called pre-spondylolisthesis or spondylolysis. This condition is very much more common than ordinarily supposed.

The patient may be seen because of gradual onset of pain of a fatiguing nature, or with an acute onset following trauma. It is present in the lumbosacral region, with or without sciatica, and is aggravated by bending and lifting, particularly the latter. The physical signs may vary, depending on the severity. The trunk may appear shortened with the thorax sunk into the pelvis. Transverse soft tissue folds may be present in the loins and there may be forward shift of the spine. This may be palpable with a prominence of a lower spinous process which is posterior. There is limitation of spine motion with increased pain on backward bending. The diagnosis is confirmed by x-ray.

Treatment consists in rest, avoiding lifting, and back support in the form of a belt, corset or brace. In cases unrelieved by conservative treatment stabilization of the spine by fusion operation may be necessary. This anomaly is of importance in industrial cases where disability frequently results owing to aggravation by trauma.

I. INFLAMMATORY LESIONS

(a) Pyogenic Osteomyelitis is of three types:

(1) That with acute onset is a fulminating disease of considerable severity. The patient is acutely ill with severe pain unrelieved by rest, marked muscle spasm, fever and leukocytosis. The treatment consists of management of the infection and rest of the spine.

(2) The more common type is the subacute, of insidious onset, in which there may be no fever, but presence of more or less constant pain, not relieved by rest with muscle spasm and restriction of motion. X-Rays will show rarefaction of bone with areas of bone destruction and reactive new bone formation. Treatment is that of the infection plus long term splinting of the spine usually in bed on a frame or in plaster.

(d) In *Chronic Osteomyelitis* of the spine the diagnosis is made by history and the presence of sinuses and x-ray changes. The treatment is prolonged, unsatisfactory and the prognosis poor.

(b) *Tuberculosis* of the spine occurs more frequently in the dorsal or upper lumbar than in the low back. It also occurs in the sacro-iliac joints. Tuberculosis of the spine is the commonest site of bone tuberculosis in children. It is a slowly progressive disease with pain even at rest. Physical signs may consist of general signs of tuberculosis such as weight loss, night sweats, active sedimentation rate and spinal deformity, such as kyphosis, muscle spasm, limitation of motion and tenderness. X-Rays reveal a destructive lesion without new bone formation and at first one might see only some narrowing of an intervertebral space with increased perivertebral shadows from abscess formation.

A search for tuberculosis elsewhere should be made. Treatment consists of prolonged bed rest on frame or in plaster, prevention of deformity and sooner or later spinal fusion operation.

(c) A third inflammatory lesion to consider is the severe crippling disease called Marie Strumpell Spondylitis. It usually affects young males about 20 to 30 years old. The onset is usually in the sacro-iliac joints with extension up the spine and eventual fixation. Ocassionally the onset is in other large joints such as the hips. If untreated the patient will be deformed with fixed flexion of the trunk. In nearly every case the thorax is involved with fixation and marked diminution of chest expansion. The complaint is pain and stiffness and the outstanding feature seen in the rigidity of the spine—usually with flexion. It is interesting to note that these patients are often shorter in height in the evening than in the morning, due to flexion. There is usually a secondary

anaemia and an active sedimentation rate. X-Ray findings reveal sacro-iliac arthritis, often with ankylosis as the first sign. Later on one sees calcification in the ligaments of the spine with the typical bamboo spine.

Treatment consists of rest, elimination of the infection, and prevention or correction of deformity. The latter is done by splinting, traction and immobilization. The patients require combined medical and orthopaedic care. When the disease is quiescent, the patient may be up and often will require a brace. The prognosis depends to a great extent on the success achieved in preventing deformity. After a period of ten to fifteen years as a rule progress ceases and if ankylosis is complete, the patient is then free of pain.

(d) *Fibrositis* is often called muscular rheumatism or lumbago. This is a non-suppurative inflammatory lesion affecting fibrous tissues, and muscles. It affects both sexes and different age groups. The etiology is unknown. Focal infection, climate and occupation are considered to be causative factors. The diagnosis is made by the presence of pain associated with tender areas, usually at muscle attachments. Sciatic radiation may be present. Treatment involves rest, heat, novocaine injections of tender areas followed by massage and exercises, and elimination of infection.

III. Of the degenerative lesions, ostœarthritis is of major importance. This is a very common cause of low back pain occurring in an older age group, more commonly in males. There is pain, limitation of motion and x-ray changes. Treatment consists of rest, restriction of activity and support in the form of a belt or brace. A firm bed with fracture boards is often beneficial, and local heat frequently gives temporary relief.

If arthritic changes are seen confined to a localized area, in younger patients it is usually indicative of a localized response to trauma. This is most frequently seen at the lumbosacral region and frequently here one also sees associated with it disc lesions. In these cases in which adequate conservative treatment has failed, operative treatment may be useful.

IV. Of the neoplastic group very little will be said. Primary tumours are very rare and are usually haemangioma, sarcoma or Ewing's tumour. Spinal cord tumours may be a cause of back pain.

Secondary tumours from breast, bronchus, thyroid, prostate, uterus and kidney occur and show multiple lesions with pain not relieved by rest, and occasionally pathological fractures.

V. The *Traumatic Group* is the largest group seen.

(a) Contusion is similar to that seen selsewhere. Resulting from a blow, there is bruising, pain, muscle spasm and tenderness. Treatment consists of rest, a firm bed, possibly adhesive strapping and later physiotherapy.

(b) Muscle and ligamentous sprain may be similar to contusion. This results from trauma and lifting, or falling and wrenching the back. The pain may be severe, and rest, heat and support by adhesive strapping may be all that is necessary. If a well localized tender area is present, novocaine injection is beneficial combined with the other treatment.

(c) Sacro-iliac strain is mentioned as a definite entity. Strains of this joint do occur, although infrequently. Many of the cases formerly labelled sacro-iliac strain were probably disc lesions. It is a stable joint which is not easily injured. Actual subluxation is most uncommon.

During and following pregnancy there is very definite relaxation of the joint. This may be extremely marked. The clinical picture then shows pain and tenderness in the region of the joint, limitation of flexion of the spine through the last portion. This may not be noticed with the patient sitting down. There is limitation of straight leg raising. In old sacro-iliac conditions arthritic changes are frequently seen by x-ray.

Treatment consists of rest, support by a belt or corset and occasionally physiotherapy. In acute sacro-iliac sprain manipulation is frequently indicated.

(d) Lumbosacral strain is the name given for the majority of conditions which cause pain in the low back. It is very common, and with good reason, for this is the most unstable portion of the spine, which is in a transitional state between the mobile spine and fixed pelvis. There are numerous ligaments and muscles supporting the joint, and many variations from the normal bony architecture. Disc protrusions are most commonly seen at this level. Lifting or bending injuries are usually the cause of the pain. There is localized pain, tenderness, muscle spasm and limitation of motion, frequently with some fixation of the lumbar curve. There will usually be limitation of straight leg raising with hamstring spasm and pain in the lumbosacral region on passive spine flexion. A true lumbosacral strain is a ligamentous sprain. It is often impossible to know exactly what the pathological lesion is.

The treatment includes adequate rest with fracture boards, strapping the back, limitation of activity and heat. Later more vigorous physiotherapy with exercises for rehabilitation, and in the chronic cases support in the form of a wide pelvic belt, brace or corset.

(e) Pre-existing anomalies which have been aggravated by trauma include a fairly large group of patients. In these the recovery is slow and prognosis often doubtful. Some will eventually require operative treatment.

In conclusion I wish to emphasize the complexity of the problem and the impossibility of making a quick diagnosis without a proper history, physical examination and investigation. In addition to this there is the second very important factor dealing with treatment. This is to emphasize the importance of conservative treatment for a good trial before considering operative interference, in spite of an apparent clear cut diagnosis. It will be found that the vast majority of patients will be relieved in time without operative treatment. It should also be noted that no patient is entirely free of disability following any operation on the back.

MEDICAL MANAGEMENT AND HYPERTENSION

By F. CROFTON, M.D.

This is one of the many unsuccessful chapters in therapeutics. The fundamental causes of essential hypertension are obscure and so far we can neither remove nor combat them. Medical treatment of essential hypertension has not changed in the last twenty-five years.

Salt Restriction.

One of the older forms of treatment has been salt restriction. Allen and Sherrill reported good results with this treatment. However they were not confirmed by other investigators. McLester, O'Hara and Walker did not obtain better results with severe salt restriction than with moderate restriction. Mosenthal, Berger and Feneberg cut down salt intake, then raised it above normal with no significant change in blood pressure. Renger and Billoon did not obtain better results than with ordinary treatment.

Nitrites and Nitrates.

These drugs produce only temporary lowering of blood pressure with a temporary rise following. Grollman in 1940 reported testing sodium nitrite, erythrol tetranitrate, allium sativum, acetyl beta-methylcholine, potassium thiocyanate and sodium chloride

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on experimental hypertensive animals without lowering of blood pressure. He found only renal extracts produced lowering of blood pressure.

Renal Extracts.

Stevens *et al* treated a few patients with kidney extract; some had lowering of blood pressure but also fever and hypersensitivity reactions. They considered it too toxic at present. Schales, Stead and Warren treated seven patients with significant lowering of blood pressure in five, related directly to amount of fever, sweating, weakness and local reactions. Patients with no reactions had no lowering of blood pressure.

Vitamin K.

Rosenthal and Shapior gave synkayvite to fourteen patients, 25 mg. orally daily for three to six weeks, and claimed fair results. However, the blood pressure drop was not significant and could have occurred in the course of normal variation.

Moss and Wakerlin reported no effect of vitamin K on experimental hyptertensive dogs.

Vitamin A.

Taylor et al studied effect of vitamin A on sixteen patients without any significant change in blood pressure.

Moss and Wakerlin in December, 1946, reported the effect of various vitamin A products on experimental hypertensive dogs and found varying responses depending on the preparation and different lots of the same preparation. They feel fairly sure that this anti-hypertensive principle is not vitamin A but some impurity and they have yet to separate and identify it.

Potassium Thiocyanate.

This drug has had periods of popularity and there are many reports of its effective use. However, it is a toxic drug and there is little difference between the blood concentrations that produce therapeutic and toxic effects.

Goldring reports it as causing effective lowering of blood pressure in 30% of sixty-nine cases. However, he had thirteen cases of toxicity and two deaths.

Many patients had subjective improvement without lowering of blood pressure.

In most cases the results claimed are no better than those by other less dangerous methods. The drug is not accepted by the American Council on Pharmacy and Therapeutics.

Drugs and Other Compounds.

Many papers have been written advocating a great variety of treatments.

Ayman made a study of thirty-five papers. Some of the methods of treatment were:-

1. Irradiation of suprarenal region.
2. Mistletoe.
3. Low salt diet.
4. Liver extract.
5. Radium to skull.
6. Diathermy.
7. Corpus Luteum.
8. Subtonin.
9. Watermelon extract.
10. Calcium salts and low protein diet.
11. Benzyl benzoate.
12. Benzyl succinate.
13. Radium water.

to mention a few of the less bizarre ones. Practically every article claimed complete or partial symptomatic relief. In the majority of cases there was a moderate reduction in blood pressure, in a few cases marked reduction. However, symptomatic relief was greater than one would expect from blood pressure drop and frequently out of all proportion to blood pressure fall. Sometimes marked relief occurred without blood

pressure drop. Ayman then teated forty unselected cases with dilute hydrochloric acid with enthusiasm and 82% showed definite improvement of symptoms.

O'Hare in reporting average drop of 34 mm. systolic pressure in twenty-five cases treated with mistletoe admits that on the basis of past experience such variations occur without therapy. He also noted that patient's blood pressure drops gradually and to a considerable extent on every visit up to five or six visits to his office even without treatment. Other men have reported these constant variations in blood pressure. These variations make it extremely difficult to evaluate the true worth of any type of treatment.

In view of these findings it would appear best to use a simple routine for the treatment of hypertension. Patients should not be told what their blood pressure level is, only that it is slightly above normal, so as to prevent them from develloping a phobia over it—feeling much better when it is down a few points and worse when it rises a few points. The blood pressure should be taken infrequently. If overweight patients should be given a reducing diet. To quote Wilkins—"instability, anxiety, fear, resentment and alternate aggression or dependence are typical emotional attitudes of these patients. They are sensitive to petty annoyances and especially to personal slights and disagreements. Self-recrimination for these traits is also commonly indulged in and they may revolve in an emotional vicious circle, especially when they have been told that emotionality affects the blood pressure."

The patient will derive a great deal of benefit subjectively if the doctor gives him sympathy, encouragement and reassurance, and listens to his personal troubles and difficulties. Sedatives such as phenobarbital given t.i.d. are of great benefit in cutting down the patient's anxiety and tension. They should be encouraged to sleep long hours if possible and rest for an hour or so during the day. They should be encouraged to slow down generally but to continue with mild, not too strenuous exercise, and to take as many vacations as financially possible.

In treatment of complications, cardiac failure is benefitted by treatment with digitalis, diuretics and bed rest.

I will end with two reports on results of sympathectomy. Ryland reports forty patients with generally poor results; one, brilliant result; five, fair result; nine, no change; eight, died within two weeks of operation; eleven died within one and one-half years.

Flaxman compares 244 of his medically treated cases with 350 of Peet's surgically treated cases. He did not consider subjective symptoms, cardiac status, slight blood pressure changes as subject to personal interpretation. He found significant blood pressure drop in comparatively the same percentage and mortality in the two series the same. The number of cases of malignant hypertension alive at the end of five years was the same in both series.

BIBLIOGRAPHY

Allen, E. V. and Adson, A. W.—The Treatment of Hypertension: Medical versus Surgical. Ann. Int. Med. 14: 288, 1940.

Ayman, D.—Present Day Treatment of Essential Hypertension. Med. Clinics of N.A. 28: 1141, 1944.

Ayman, D.—An Evaluation of Therapeutic Results in Essential Hypertension. J.A.M.A. 96: 2091, 1931.

Bing, R. J. and Thomas, C. B.—The Effect of Two Dioxane Derivatives on Normal Dogs and on Animals with Neurogenic and Renal Hypertension. J. Phar. & Exper. Ther. 83: 21, 1944.

Binger, C.—A Critique of Psychotherapy in Arterial Hypertension. Bull. New York Acad. Med. 21: 610, 1945.

Berger, S. S. and Feneberg, M. H.—The Effect of Sodium Chloride on Hypertension. Arch. Int. Med. 44: 531, 1929.

Del Solar, A.—Fatal Poinsoning from Potassium Thiocyanate used in the Treatment of Hypertension. Arch. Int. Med. 75: 241, 1945.

Fanson, E., Kindsey, D. and Palmer, R. S.—Potassium Sulphocyanate in Essential Hypertension. New Eng. J. Med. 229: 540, 1943.

Flexman, N.—The Treatment of Hypertension: Comparison of Mortality and Medically and Surgically Treated Cases. Ann. Int. Med. 20: 120, 1944.

Golding, W.—The Management of Hypertension. Bull. New York Acad. Med. 19: 317, 1943.

Grollman, A., Harrison, T. R. and Williams, J. R.—The Therapeutics of Experimental Hypertension. J. Pharm. & Exper. Therap. 69: 76, 1940.

Grollman, A.—Preparation of Extracts from Oxidized Marine and other Oils for Reducing Blood Pressure in Experimental and Human Hypertension. J. Pharm. & Exper. Therap. 84: 128, 1945.

Grollman, A. et al—Sodium Restriction in the Diet for Hypertension. J.A.M.A. 129: 533, 1945.

Gnebea, C. M. and Shackelford, H. H.—The Effect of Phenobarbital on Blood Pressure in Arterial Hypertension. Arch. Int. MMed. 36: 366, 1925.

Kurtz, C. M. et al—Results of Sulphocyanate Therapy on Hypertension. Amer. J. Med. Sc. 202: 378, 1941.

McLester, J. S.—Influence of Rigid Salt Restriction in Diet. Am. J. Med. Science. 163: 794, 1922.

Moss, W. G. and Wakerlin, G. E.—Vitamin A in the treatment of Experimental Renal Hypertension. J. Pharm. & Exper. Therap. 86: 355, 1946.

O'Hare, J. P. and Walker, W. G.—Observations on Salt in Vascular Hypertension. Arch. Int. Med. 32: 283, 1923.

Rosenbluth, M. B.—The Practical Management of Hypertension. Bull. New York Acad. Med. 20: 557, 1944.

Rosenthal, N. and Shapiro, S.—The By-Effects of Anti-hæmorrhagic Quinones. J. Pharm. & Exper. Therap. 85: 294, 1945.

Schales, D. and Stead, E. A.—Non-Specific Effect of Certain Kidney Extracts in Lowering Blood Pressure. Am. J. Med. Sc. 204: 797, 1942.

Wakerlin, G. E. and Johnson, C. A.—Treatment of Experimental Hypertension with Vit. A. concentrates. J.M.A. 122: 60, 1943.

Wald, M. H. and Lindberg, H. A.—The Toxic Manifestations of the Thiocyanates. J.A.M. 112: 1120, 1939.

Walkins, H.—The Treatment of Hypertension. Med. Clin. North Am. 30: 1079, 1946.

A STUDENT'S APPEAL TO THE GENERAL PRACTITIONER

DONALD B. McCONACHIE

National Director of Public Relations, C.A.M.S.I., Toronto, Ontario

(Reprinted from February Issue, Canadian Medical Association Journal)

Are you interested in furthering the art of general practice in Canada? The Medical students of Canada are!

At its eleventh annual conference in November, The Canadian Association of Medical Students and Interns incorporated ito the miutes of a motion, the essence of which is, "Whereas there is a growing problem of inadequate medical care in some communities of Canada, and whereas there is a decreasing incentive for medical students to seek general practitioner careers, and whereas the incentive to specialize is increasing out of all proportion to the country's need, therefore be it resolved that—C.A.M.S.I. favor the principle of stimulating more interest in general practice. . . ."

What lies behind this "incentive to specialize" that is so evident in Canada's medical colleges today? It may be a result of uncritical monetary consideration on the part of the student. It may be that modern literature and the cinema have influenced the student to consider the specialist as a figure of some romance—a glorified Martin Arrowsmith. More probably it is simply ignorance on the student's part as to the function, need, and value of a general practitioner in a community. Throughout his entire medical course the student is lectured to by specialists in every subject, he observes large laboratory facilities for making complicated diagnoses, he takes clinics in large hospitals admirably equipped for the specialist approach to every condition. How many bewildered students are heard to remark, "I'm certainly going to specialize! However, can I remember everything about everything? How could I be safe in drawing any conclusion if stuck 'up-country' with no bacteriologist ,no pathologist? . . ."

Yet, despite the fears voiced by such students, the general practitioner in Canada is still maintaining the high standards of medical practice. Since he is deprived of some of the more highly specialized media for diagnosis and treatment, he must have some other means at his disposal in order to maintain these standards and these are experience, and integrity; experience in recognizing the signs by the methods available to him, and integrity in deciding the course of action.

The whole problem, therefore, seems to be one of education. C.A M.S.I. has initiated a plan in order to bring this education to the student. Efforts are being made to familiarize all general practitioners through the country with the scheme, which essentially is this: the doctor is urged to accept a medical student during the summer months as an apprentice. These clinical year students, besides being of aid to the physician (by doing routine blood work, etc.) will have an opportunity of viewing first-hand the functioning of a community doctor. He will be able to observe techniques and methods perhaps not emphasized at college, he will see an aspect of the doctor-patient relationship not seen in his clinical classes, and it is hoped he will be able to discern something of the unique position of the doctor in his community.

Doctors who are interested in this plan are invited to write to the National Executive of C.A.M.S.I.: Miss Joan Vale (Secretary, C.A.M.S.I.) Room 107, Anatomy Building, University of Toronto, Toronto 2, Ontario. Those writing should include their names, addresses, and special qualifications required of the student if desired. All such names received will be sent at once to the various medical schools in the country. The student will then complete the arrangements in a personal basis.

You are reminded that this scheme applies to all provinces. Although it actually acts regionally, all initial arrangements are made through the National Executive to insure complete distribution.

The C.A.M.S.I. is most concerned that the true value of the general practitioner be made known to the student, and urges the co-operation of all doctors in solving this problem of education.

News and Notes

We regret to record the death of one of our pioneer M.D.'s, Charles M. Kingston. Dr. Kingston graduated from Trinity Medical School in Toronto and did post-graduate study in surgery in New York. He practised in the Grand Forks district of British Columbia for over forty years, before retiring to West Vancouver two years ago. He built and operated the hospital at Grand Forks, doing most of the hospital surgery as well as his general practitioner's duties. In 1928 Dr. Kingston was elected M.L.A. for Grand Forks-Greenwood. We extend our sincere sympathy to Mrs. Kingston and family.

We note with interest that Dr. W. C. Gibson of Victoria has accepted an appointment at the University of Sydney in Australia, where he will teach neuropathology and conduct research in nervous and mental diseases.

Dr. D. E. H. Cleveland attended a meeting of the Los Angeles Dermatological Society during February, at which tentative plans were made for the organization of a Western Dermatological Society.

We extend our heartiest congratulations to Dr. R. B. White, who has been named Penticton's First Citizen for 1947-48, the first time the distinction has been given to anyone. Dr. White's name will head the list of "good citizens" on a bronze plaque to which annual additions will be made.

Dr. S. A. Strachan has recently gone to Kimberley for a short period to relieve Dr. H. I. O'Callaghan while the latter visits the Old Country.

Dr. G. C. Robinson of Vancouver is now associated with the Hospital for Sick Children in Toronto.

Our deepest sympathy is extended to Dr. Elaine Peacock on the death of her father, and to Dr. J. K. Kelly on the loss of his mother.

We regret to record the death of Dr. Wilfrid Stringer, who died suddenly at Port Alberni only two days after he had arranged to start practice there. Dr. Stringer was a Surgeon Lieutenant-Commander with the Royal Canadian Navy during the last war and has only recently registered with the College of Physicians and Surgeons of British Columbia. We extend our sincere sympathy to Mrs. Stringer and family.

Dr. N. B. Reilly has left Montreal to accept an appointment with the Royal Jubilee Hospital in Victoria.

Dr. J. W. Neville, formerly of Kamloops, has gone to Williams Lake to practise.

Dr. I. B. Cameron of Youbou is now associated with the Irving Clinic in Kamloops.

Dr. D. M. Boyd has left Cowichan to do post-graduate work in Toronto.

Dr. A. E. Shore, formerly of Calgary, Alta., has recently settled in Victoria.

Dr. L. C. Grisdale has left Langley Prairie and is now associated with the Royal Alexander Hospital in Edmonton, Alta.

Congratulations are extended to the following doctors and their wives on their recent good fortune:

Dr. and Mrs. S. Z. Bennett, Salmon Arm, a son. Dr. and Mrs. W. S. Maddin, Vancouver, a son. Dr. and Mrs. W. J. S. Melvin, London, England, a son. Dr. and Mrs. G. R. Warriner, Vancouver, a son.

Dr. J. S. Cull, for ten years deputy provincial health officer, will leave that position to become a provincial medical director in the Canadian Red Cross Transfusion Service.

Dr. W. O. H. Perry has left Shaughnessy Hospital to take up residence in Montreal.

Dr. A. J. Kergin of Prince Rupert is, at present, doing post-graduate work in Toronto.

Dr. A. L. Lynch, since 1934 chief medical officer for the C.P.R., has resigned. Dr. G. A. Petrie has been appointed to succeed him, according to an announcement from George H. Baillie, vice-president of the Pacific region.

ANNOUNCEMENT

MRS. D. M. ARCHER

Until recently, in charge of the Physiotherapy department, Shaughnessy Hospital, Vancouver

and

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Fishberg, A. M.: Heart Failure, 2nd Ed., Phila., Lea & Febiger, 1946, p. 733.

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The Treatment of Hypertension, editorial, J. A. M. A. 135:576 (Nov. 1) 1947.

". . . [By] the more frequent usage of the mercurials in cardiac dyspnea the attending physician . . . PROLONGS THE LIFE AND COMFORT of his patient."

Donovan, M. A.: New York State J. Med. 45:1756 (Aug. 15) 1945.

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Modell, W., Gold, H. and Clarke, D. A.: J. Pharm. & Exper. Therap. 84:284 (July) 1945.

- "The authors favor the administration of mercury intramuscularly rather than intravenously and for this purpose employ preparations such as MERCUHYDRIN."

Thorn, G. W. and Tyler, F. H.: Med. Clin. North America (Sept.) 1947, p. 1081.

- "The results of our experiments suggest that the greatest cardiac toleration for mercurial diuretic occurs with MERCUHYDRIN."

Chapman, D. W. and Shaffer, C. F.: Arch. Internal Med. 79:449, 1947.

- "We have limited the use of chemical diuretics almost entirely to . . . MERCUHYDRIN."

Weiser, F. A.: Grace Hospital Bulletin, Detroit (Jan.) 1947, p. 25.

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