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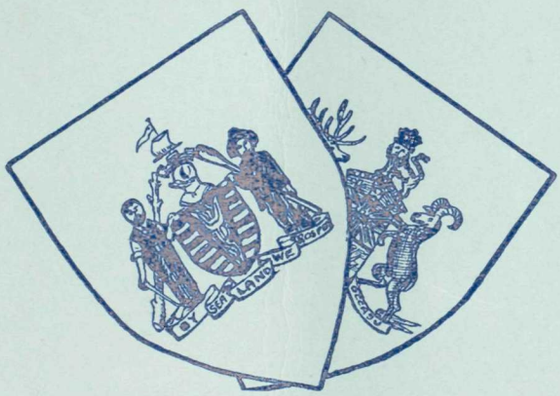
The BULLETIN

OF THE

VANCOUVER MEDICAL ASSOCIATION

Vol. X. APRIL, 1934 No. 7



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THE VANCOUVER MEDICAL ASSOCIATION

BULLETIN

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

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VANCOUVER HEALTH DEPARTMENT

STATISTICS—FEBRUARY, 1934

Total Population (Estimated)	243,711
Japanese Population (Estimated)	7,866
Chinese Population (Estimated)	8,315
Hindu Population (Estimated)	251

	Number	Rate per 1,000 Population
Total Deaths	196	10.9
Japanese Deaths	7	11.6
Chinese Deaths	10	15.7
Deaths—Residents only	182	9.7
Birth Registrations only	182	15.1

Male 149; Female 133.

INFANTILE MORTALITY—

	Feb., 1934	Feb., 1933
Deaths under one year of age	7	12
Death rate—per 1,000 births	24.8	57.8
Stillbirths (not included in above)	11	4

CASES OF CONTAGIOUS DISEASES REPORTED IN CITY

	January, 1934		February, 1934		March 1st to 15th, 1934	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Smallpox	0	0	0	0	0	0
Scarlet Fever	257	0	268	0	189	0
Diphtheria	1	0	1	0	0	0
Diphtheria Carrier	0	0	0	0	0	0
Chicken Pox	77	0	49	0	31	0
Measles	0	0	2	0	38	0
Rubella	1	0	0	0	0	0
Mumps	48	0	93	0	49	0
Whooping-cough	14	0	16	0	12	0
Typhoid Fever	0	0	0	0	0	0
Undulant Fever	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0
Tuberculosis	44	8	69	11	18	0
Meningitis (Epidemic)	0	0	0	0	0	0
Erysipelas	1	1	3	0	1	0
Encephalitis Lethargica	0	0	0	0	0	0
Paratyphoid	0	0	0	0	0	0

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PROGRAMME OF THE 36TH ANNUAL SESSION

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

CLINICAL MEETINGS will be held on the third Tuesday of the month at 8 p.m.

Place of meeting will appear on Agenda.

General meetings will conform to the following order:

8:00 p.m.—Business as per Agenda. 9:00 p.m.—Paper of Evening.

1934.

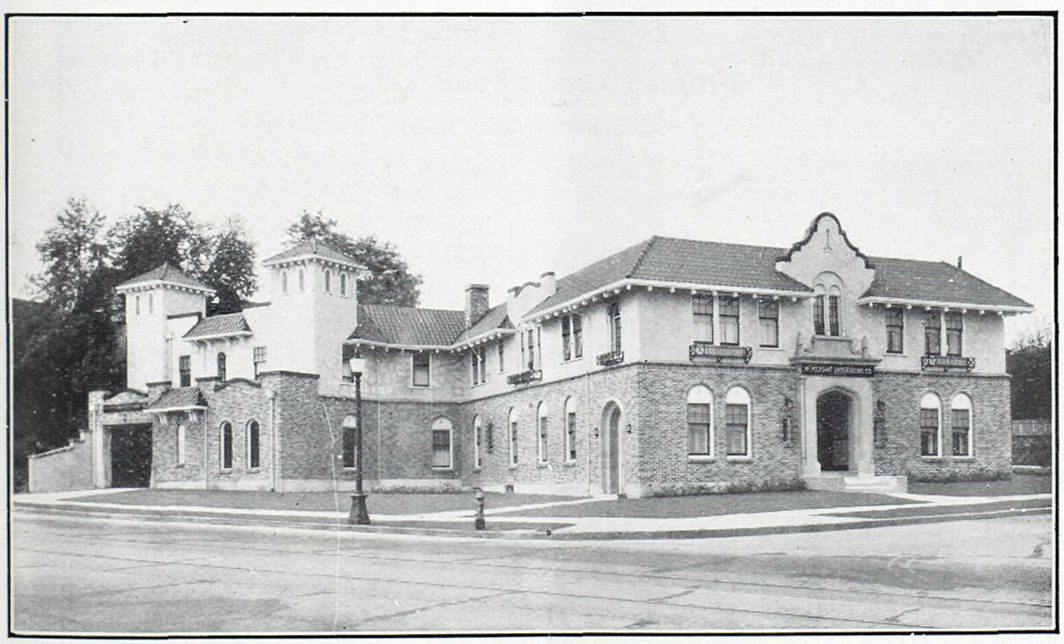
April 3rd—GENERAL MEETING.

Papers: Dr. Murray Baird: "Erythema Nodosum in Relation to Tuberculosis."

Dr. D. E. H. Cleveland: "Drug Eruptions."

April 17th—CLINICAL MEETING.

April 24th—ANNUAL MEETING.



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EDITOR'S PAGE

We record the passing of another Osler dinner, the thirteenth: and congratulate the Executive of the Association on their choice of a speaker in Dr. J. G. McKay. We hope to publish the lecture at an early date; but feel (for even a humble editorial board has its feelings, though few may realise it) that it ought to be made a criminal offense to deliver such an important lecture as this is, *extempore*. *Suum cuique*: to each his gifts: and Dr. McKay has in high degree the wonderful gift of being able to think on his feet, and develop his speech as he goes; but the unfortunate editor of this important Journal, while he listens with the keenest pleasure to such an address as Dr. McKay gave us, is conscious, with the other side of his mind, of a keen feeling of disappointment over the fact that he cannot hope to have a connected and considered statement to present to his readers. Happily in this case we were able to get the address practically verbatim, and, with Dr. McKay's help, hope to get it into good shape for publication. Dr. Thornton, late Minister of Health for Manitoba, and a former member of the Canadian House of Commons, gave us a review of medical history, and what he said, and recent events in medical life, brought home forcibly to some of us the fact that it is a grave error in the conduct of human affairs to be too wise, and to attempt too definitely to control the future. The Fathers of Confederation, and those who set Canada's feet on the beginning of the road to national progress, were great men, devoted heart and soul to Canada's cause—but in many things they chose, as we see now, a rather limited course, and nowhere so much as in matters of education and health. Perhaps it was inevitable at the time, though we take leave to doubt it, that they should adopt the course they did. But look at the result: a small nation, of ten million people, with nine different systems of health administration, and educational control; when surely it would have been so much better to have one single system governing all the provinces equally. There are, we admit it, some dangers and disadvantages in the latter course —but, we firmly believe, none that could not be overcome by patience and sincerity; while our present welter of systems with its provincial limitations and jealousies of contol, leads to a terrible waste of time and money—and we cannot believe it is an efficient plan.

Take the matter of medical care of relief cases, to mention one of the smallest angles, which yet is one of the most important angles, of the national situation with regard to unemployment, and what could be more important at the present juncture? Every province has a separate method of handling this problem, which yet in its essentials is exactly the same in all. And our federal government at Ottawa has *no* plan. It "passes the buck" to the provinces, which pass it back. And so we find situations, such as that referred to by a doctor practising in the interior, who writes to the B. C. Medical Council, complaining, and most justifiably so, of the relief situation in his locality, where he (and this is true of scores of doctors in the unorganised districts) is dependent entirely on the outcome of negotiations with Victoria for his pay—and so far it would seem that Codlin in Victoria refers one to Short in the country, who promptly sends one back to Codlin.

We are very fortunate in having in Victoria as our champion in these matters, Dr. H. E. Young, who has without doubt done his very best to secure remuneration for medical men. He has been singularly successful, too, considering his very limited budget, and the precariousness of the financial situation. But the point we wish to make is that this question should not be dependent on anyone's goodwill—it should be a matter of business, and the

medical man should be paid for his work, as far as this is possible, as automatically as the baker or butcher or undertaker, who would not render their services unless payment were guaranteed.

It is felt by some men, we think, that the men in Vancouver and Victoria are receiving preferential treatment—perhaps even they feel that the Council hearkens more to these groups because they are larger. This, we can assure them, is quite contrary to the facts. The Council, we have reason to know, has done its level best, by representation to the authorities, by interviews with those concerned, to secure better treatment for the men in the unorganized areas. In some particulars they have won notable victories. But after all, the Council cannot accomplish the whole of the task.

If Vancouver and Victoria, and other cities throughout Canada, have been able to secure any recognition of their dues, it has only been because of a firm and united stand; and this must be the policy, we feel, of other districts.

Meantime, as a profession, we should, as we think, hope and work for a national policy: as the Canada Medical Act was the result, though its growth was slow, of a co-ordinated and determined action, so must the other be—and ultimately it will solve most, if not all, of our problems as medical men.

* * * *

NEWS AND NOTES

We extend, and we know we speak for the whole profession in doing so, our sincerest sympathy to Dr. and Mrs. Howard Spohn in their recent bereavement, by the death of their daughter, Miss Peggy Spohn.

* * * *

Dr. J. M. McDiarmid, of Abbotsford, is in Europe, taking postgraduate work in Vienna, we understand.

* * * *

Dr. A. M. Agnew is also away—but we do not know where—on the same quest for further knowledge. Where, we wonder, could one get a satisfactory postgraduate course without the horrible expense it seems to entail? We answer our own question by referring our readers to the forthcoming summer school.

* * * *

We understand that Dr. R. S. Manson, formerly of Princeton, has opened an office in New Westminster.

* * * *

Dr. John D. Whitebread has started practice in Hope.

* * * *

Dr. H. Campbell-Brown was recently elected to membership in the Vancouver Medical Association.

* * * *

And Bridge River now has another medical man, in the person of Dr. D. J. FitzOsborne, whom many of our readers will remember as an interne at St. Paul's.

* * * *

While another interne, Dr. J. Nash, is taking the work as *locum tenens*, of Dr. Rogers, at Chemainus.

* * * *

Welcome, Victoria! A reverse current in the passage of birds is beginning to appear, and Vancouver is the gainer by it. Which, being inter-

preted, means that Dr. Gordon C. Kenning of Victoria has been elected an Associate Member of the V. M. A., and we are very heartily glad to have him. We hope that this announcement will not prejudice his standing, either professionally or as a citizen, in Victoria, and further, we hope that many of his brethren (and, *experto crede,* they are all good fellows) will follow his example.

* * * *

ASSOCIATION MATTERS

The Association, it is hoped, will have an opportunity, about the middle of April, of hearing Dr. J. T. Fulton, a brilliant young physiologist on the staff of Yale University. Due announcement will be made.

* * * *

The Summer School has its programme completely lined up, we understand, and it is an excellent one. Nobody who can possibly attend should miss it. The fee is being kept as low as possible, and is ridiculous, in view of what is given. A complete announcement will appear in the next issue.

* * * *

The annual Osler lecture, one of the outstanding events of our year, was held at the Vancouver Hotel on March 7th. A hundred and ten members were present, a notable tribute to the sincere esteem and affection which we all feel for the speaker of the evening, Dr. J. G. McKay.

The long head table was occupied by Osler lecturers of past years, and the array was most imposing. After all, Dr. McKay is the thirteenth in line, and, we must say, most efficiently dispelled any traditional shadows that might attach themselves to the number thirteen. After a very pleasant dinner, the Association was given a delightful musical treat by the two Misses Parham. Hon. Dr. R. S. Thornton, who was a guest of the Association for the night, gave a brief review of the history of the Canada Medical Act.

Dr. J. G. McKay took as his subject Psychiatry, and in a talk of some forty minutes, kept the audience deeply interested by his presentation of the subject. He dealt with it largely from a historical point of view, and used this as a background on which to shew, not only the progress which has undoubtedly been made, but the real need for further and more scientific study. He made an eloquent plea, and this was really the highlight of his address, for a more scientifically designed study of the organic conditions underlying insanity, by trained biochemists and internists. Undoubtedly this would ultimately lead to a better basis for prevention, and so lead to an enormous saving in life, money and human happiness. He treated the subject as it must ultimately present itself to governmental bodies, as an economic one, and so put the whole question on a basis of reason. We hope to publish the lecture at an early date.

* * * *

LIBRARY NOTES

Review

Lettsom: His Life, Times, Friends and Descendants. By JAMES JOHNSTON ABRAHAM. Heinemann: 30s.

Mr. Abraham, "after four years of Lettsom's company at night when the labors of the day were ended," has written an interesting book. While it has to do in the main with a famous physician, yet much of its attraction lies in the descriptions of life in London in the late eighteenth century. That period was, for England, a time of change and progress; of debtor's prisons

and John Howard; of slavery and John Wilberforce; and of epidemic smallpox and Jenner. It was a time of dormant universities and of an aristocracy full of mental vigor and an intense interest in science, art and literature; and if Latin was the universal language of the learned it was also at this time that Cullen of Edinburgh commenced lecturing in English and a medical student had the option of taking his orals in either language.

John Coakley Lettsom (1744-1815) was not a great man but he was in many ways a remarkable one. A member of the austere sect of Quakers, he was born in the West Indies, educated in England and on the Continent, and after obtaining his M.D. at Leyden, started to practice in London with the backing of a fellow Quaker, John Fothergill, then the greatest man in the profession. From then on Lettsom's progress was rapid and sustained. He became the best-known physician in London and his income at one time reached the enormous sum of £12,000 a year, a "return for services rendered" which, if we consider the changed value of money, has never been enjoyed by a physician before or since. According to the standards of the time Lettsom was a good doctor, but his original contributions to medicine were few and it is not to be wondered at when the number and diversity of his interests are considered. His capacity for work was amazing. He founded the London Medical Society and was an active and leading member till his death. He founded the Sea-bathing Infirmary at Margate and established the first of the Great London Dispensaries. He was an active member and founder of the Royal Humane Society, a fellow of the Royal Society and a fellow of the Royal Society of Antiquaries. He kept up an enormous correspondence, wrote prolifically for the lay and medical press, published numerous pamphlets and was, according to his enemies, the greatest advertiser of his day; and all this in addition to an enormous practice in which the poor were not neglected, for he would see as many as fifty of them at his office before breakfast!

Mr. Abraham is a great admirer of Lettsom and his book is a labour of love. We can but be grateful for the detailed portraits of the man and his friends and the views of London life. Medical men not only quarrelled in their Societies and over hospital appointments, but also had their dinner and sporting clubs. Quacks flourished and Lettsom waged a rather unsuccessful campaign against them. There is a good account of Jenner and the early inoculationists and vaccinationists, and of John Howard and prison reform, in both of which movements Lettsom was deeply and actively interested. Curiously enough Lettsom and his friends appeared to take little, if any, interest in the events occurring on the Continent. Lettsom himself was twenty-five years old when Napoleon was born and he died a few months after the battle of Waterloo, yet he makes hardly a single reference to the campaigns that distracted Europe from 1792 to 1815.

The details concerning Lettsom's descendants are not interesting and the appendices can be passed over, but altogether this is a book to be read and enjoyed without undue haste.

* * * *

Some Recent Additions to the Library

Diseases of the Chest.—Norris and Landis. 5th ed. 1933.
Surgical Pathology—Boyd. 3rd ed. 1933.
Lettsom, His Life and Times—Abraham. 1933.
Life of Edward Jenner—Dartrey. 1933.
No. 4 Canadian General Hospital—MacKenzie. 1933.
A German Doctor at the Front—Prof. Dr. Wilhelm His.

Treatment in General Practice—BECKMAN. 2nd ed. 1934.
Biochemistry of Medicine—CAMERON and GILMOUR.
Transactions of the Ophthalmological Society of U.K. 1933.
The Harvey Lectures. 1934.
Transactions of American Ophthalmological Society. 1933.
Collected Papers Sch. of Hygiene. Johns Hopkins University. 1933.
Transactions of the American Otological Society. 1933.
Transactions of Section Ophthalmology, A.M.A. 1933.
Transactions of Section on Laryn., Otol. and Rhinol., A.M.A. 1933.
Medical Clinics, North America, for January, 1933.
Surgical Clinics, North America, February, 1934.

MISSING FROM LIBRARY

Factors of Infection in the Rheumatic State—COBURN.

MEDICAL COUNCIL OF CANADA

R. S. THORNTON, M.B.C.M., LL.D.

The Dominion of Canada came into being on the first day of July, 1867, under the provisions of an Act passed by the British Parliament and known as the British North America Act. This Act provides that "in and for each province the Legislature may exclusively make laws in relation to education." As the Dominion developed new provinces were added to the original four but the principle of financial control of education was duly maintained.

The effect of this provision was that each province developed along its own lines and passed its own act for the qualification and regulation of the medical profession. Hence the physician had provincial status only. There were no Canadian physicians, meaning by that expression men whose qualification for practice was recognized throughout the several provinces. This caused serious inconvenience and disabilities to the public and to the profession. When a physician moved from one province to another a new examination was required and there were as many difficulties to be encountered as in moving into another country.

The first definite practical step to find a remedy was taken at the Canadian Medical Association meeting at Montreal in 1895. A committee was appointed under the chairmanship of Dr. Thos. G. Roddick, dean of the Medical Faculty of McGill University. The committee first attempted to establish a plan of inter-provincial registration by agreement between the medical councils of the several provinces. This plan was abandoned as lacking permanence and stability. It was then decided to attempt to secure an enactment by the Dominion Parliament subject to enabling legislation by the several provinces.

This meant the securing of a common understanding between the members of the profession in the several provinces, the consent of each provincial medical council, the passing of an enabling act by each provincial legislature and the passing of the Act itself through the Canadian Parliament. Dr. Roddick accepted the task of mobilizing and harmonizing these several factors in public opinion. He set about his task with tact, courtesy, perseverance and genial urbanity. On three occasions he travelled across the Dominion interviewing medical councils and addressing meetings of the profession. He was assisted in his campaign by earnest supporters in

different sections of the country. Having secured a measure of support for his proposal he entered the Dominion Parliament in 1900 in order to be in a position to pilot his measure personally through the House. Under his guidance the Canada Medical Act was passed in 1902.

But success was not yet attained. The Act contained a clause that it could only become operative when all of the provinces consented and as general sentiment had not matured to that point, the matter rested.

Meanwhile a new factor appeared. The provinces of Alberta and Saskatchewan were created in 1905 and the whole western country entered in a stage of rapid development. The four western provinces were in accord with the desirability of Dominion Registration. Pending the accomplishment of this end as a step towards its attainment a movement was inaugurated to form a medical federation of these four western provinces. At a meeting held at Banff in Sept., 1909, it was resolved to establish a Federal Board to hold examinations in medicine and to grant to those passing the examinations a certificate which would be accepted for registration in each of these four provinces.

This action had the effect of stimulating and maturing sentiment elsewhere and at the Canadian Medical Association meeting in Winnipeg in 1911 a resolution was unanimously carried asking Dr. Roddick to make a further effort to get the Canada Medical Act into operation. This he agreed to do and at a meeting of representatives of all the councils, held at Montreal, agreement was made on certain amendments to the original Act. As Dr. Roddick was not now a member of Parliament the amending bill was sponsored by Dr. Roche, M.P. for Marquette, and finally enacted in 1912.

All the provincial legislatures had also passed the necessary enabling legislation and the way was clear for the organization of the Medical Council of Canada. This was what brought to a successful issue the effort begun seventeen years before.

The Canada Medical Act constitutes a body known as the Medical Council of Canada and authorizes the Council to create an examining board and establish a medical register for Canada. Those who pass the examination are enrolled on the register and obtain a certificate of Licentiate of the Medical Council of Canada—L.M.C.C. This certificate entitles the holder to register in any province of the Dominion on payment of the provincial fee.

The first meeting of the Council assembled in the Parliament Building at Ottawa on November 7th, 1912. Three days were spent in discussing and arranging details and Council adjourned to meet in June, 1913. At this meeting organiation was completed with Dr. T. G. Roddick, President; Dr. R. S. Thornton, Vice-President; and Dr. R. W. Powell, Registrar. The Canadian Medical Register was opened on July 1st, 1913, the president being number one on the roll and vice-president number two.

With the opening of the register the profession attained a national status. The Council has now been in existence twenty-one years. In round numbers there are thirty-five hundred names on the register. Examinations are held annually in June at nine centres across the Dominion from Halifax to Vancouver, and in October at Montreal and Winnipeg. On an average three hundred names go on the register each year.

The provinces of Nova Scotia, Prince Edward Island, Manitoba, and Alberta, have a reciprocity agreement with Great Britain under which a few men register in these provinces from Great Britain and other Dominions.

In Nova Scotia, Quebec, Manitoba, and Alberta the University exam-

ination qualifies both for the University degree and for provincial registration, but the great majority of the graduates take also the Dominion qualification to give them national standing and the right of entry to the other provinces.

The Province of Ontario has decided to give up its Council examinations, the last being held in June, 1934, and to accept the Dominion examinations in lieu thereof.

With these reservations the qualification obtained from the Medical Council of Canada has become the sole qualification for registration throughout Canada.

PNEUMOCOCCIC INFECTION

H. A. Des Brisay

(Read before the Osler Society of Vancouver)

Pneumonia causes 10% of all deaths. Lobar pneumonia, broncho-pneumonia, and bronchitis (the latter usually of pneumococcic origin) together cause almost twice as many deaths as tuberculosis.

I wish to review briefly the problem facing us in the treatment of pneumococcic infections, and to try to give some idea of the odds against which we are working.

From the practical point of view we wish to know what results various forms of therapy have yielded.

No treatment can be credited with reduction in the mortality of a disease, until we know definitely what that mortality may be.

As there are so many variables in pneumonia, mortality figures are apt to be rather uncertain. It is generally stated that in lobar pneumonia, the death rate is between 20% and 60%; in broncho-pneumonia anywhere from 14% to 66%. Such figures usually include patients of all ages, in all conditions, and often vary from year to year in the same locality. The figures from Great Britain were much lower than those from United States, for example. Case reports often include only selected cases of proper age group, those treated early, etc. We all know that Types I. and II., in lobar pneumonia, are most commonly found in the young and up to middle age—(in over half according to American observers, and in about two-thirds according to the British)—and we are told that the usual mortality is 30% for Type I., and 40% for Type II. However, these figures are often considered high. In nearly 7,000 cases of lobar pneumonia occurring in the United States Army Camps in 1918—before serum was used—the mortality was only 10.7%. In Great Britain, in over 1,000 cases (1118) —not treated with serum—the fatality rates were 10.8% for Type I., 21.5% for Type II., and 40.9% for Type III.

Waterfield reports that in Guy's Hospital, for the years 1921 to 1930, the death rate of lobar pneumonia was 16%. One third of deaths occurred in patients over the age of 50. There were no deaths between the ages of 15 and 20.

At No. 3 General Hospital in France, the rate was 26.1%.

American figures are higher than that of Great Britain.

Bellevue Hospital	32.2%
Rockefeller Hospital	19.5%
Boston City Hospital	19.6%

Wells in 1906 gave the mortality rate in lobar pneumonia in nearly 700,000 cases (699,130) as 19%. The usual rate in this form is apparently, then, not far from 20%.

Naturally a large number of serious cases are treated in hospitals.

In Vancouver, we often hear it stated that lobar pneumonia is relatively uncommon. The figures from the records of the Vancouver General Hospital show that in the past three years there were 268 cases of broncho-pneumonia (primary), and 232 cases of lobar pneumonia. There were 65 cases of unspecified pneumonias, and secondary and terminal pneumonia were not included. The mortality figures were for broncho-pneumonia approximately 32%. In 1931 the rate was 42%, whereas in 1933 it was down to 25%. For lobar pneumonia the rate was approximately 27%—(fairly constant through the three years).

Many cases of lobar pneumonia are undoubtedly diagnosed as broncho-pneumonia and *vice-versa*. If we are able to use specific therapy it is important to know which we are dealing with. Apart from the usual methods of physical diagnosis, how may we tell?

To begin with—we know that the pneumococci of broncho-pneumonia belong almost entirely to the heterogeneous Group IV. (of which there are 29 sub-types), although any of the other types may give rise to this form. So then, if we recover pneumococci Type I., II., or III., we are usually dealing with the lobar form.

Only 1.9% of 879 cases of broncho-pneumonia were found to be due to Type I., and 9% to Type II.

About two-thirds of cases of lobar pneumonia occur between the ages of 15 to 40, and it is usually rare at the extremes of life. Post-operative pneumonias are usually lobular and are said to occur in at least 10% of all operative cases.

Types I. and II. are the most invasive types and so are the predominating organisms in empyema, pneumococcic meningitis, conjunctivitis and endocarditis.

Of bronchitis, I need only say that the most common cause is the pneumococcus, and remind you of the aphorism that "the bronchitis of today may be the pneumonia of tomorrow."

The pneumococcus may be the cause of numerous other conditions, with or without involvement of the lung. I mention a few: Endocarditis—This is said to be more frequent than is clinically recognized. It occurs in less than half of 1% of lobar pneumonias but has been found at autopsy in over 4%. [3]Lord found 23 cases in the records of the Massachusetts General Hospital, of probable pneumococcic origin. In six of these only were the organisms found in the vegetations. [4]This condition is usually found in the left side of the heart (in spite of the usual teaching). It terminates fatally within a few days to a few weeks.

I have seen, as far as I know, only three cases: One ten years ago, and two within the past three weeks. The first case was that of a man about 47, who developed sudden symptoms and signs of aortic valve disease, with chills and high fever, nausea, vomiting, and abdominal pain, after an apparently good recovery from pneumonia several weeks previously. His blood showed Type I. pneumococcus. He had an unresolved pneumonia (with syphilis as a probable factor). Death occurred in ten days after the onset of his acute symptoms. At autopsy there was found an ulcerative aortic endocarditis. Type I. organisms were recovered from the area of unresolved pneumonia, from the spleen, and from the aortic lesion.

Case II.—Recently, a boy of 16 was seen running a septic temperature, about ten days after an acute otitis media had been treated by puncture of the drum. His blood culture was positive for Type I. pneumococcus, after a previous sterile culture. When first seen, no heart murmurs were heard, but overnight, seemingly, there developed a definite mitral systolic murmur which grew louder day by day. Physical examination and X-Ray of the chest were negative at this time. He was given 160 cc. of serum without apparent effect. A pericarditis, petechial spots, embolism of the left popliteal artery, with gangrene of the leg, and later apparently a meningitis developed. He died 16 days after admission. Autopsy was refused.

The third case was a woman of 45, who had been ill for over three weeks. She was admitted to hospital in a comatose condition, with signs of meningitis, fluid in the chest, and a to-and-fro aortic murmur. The spinal fluid was milky, with cells up to 4000, and showed pneumococci (type II.). The autopsy findings were: pneumococcic meningitis; empyema and unresolved pneumonia; pneumococcic aortic endocarditis (organisms type II.).

Pneumoccic Meningitis—This occurs in less than 1 per cent. of cases of lobar pneumonia. It is said to complicate pneumococcic endocarditis in over 50 per cent. of cases.

Pneumococcic Arthritis — This is a very unusual complication of pneumonia. (It occurs in less than one half of 1%). I have seen only one case, which occurred in a woman of 50 years with a pneumonia, which we treated with serum. After each dose of serum her temperature would fall, and her swollen painful knee would be more comfortable. After an empyema was drained, the knee was aspirated and then opened. Thick pus was evacuated and this was sterile on culture, but in the smear there were many pneumococci contained in phagocytes.

Peritonitis is seen mostly in children, and is said to occur in one half of 1% of cases.

Now as to treatment—In considering some of the forms of treatment advocated, we naturally ask what scientific basis there is, if any, for the use of any particular therapy. At present, we first wish to know the type of pneumococcus present. Perhaps some day one serum will be found that will be effective in all types. It seems possible, however, that for each type of pneumococcus there may be found a specific treatment; for already we have, as you know, sera containing specific factors against Type I., II., and VII. (the latter one of the commonest sub-types of Group IV.). Once the capsule of the pneumococcus has been removed there remains the naked R strain, the common denominator of all types. All R strains are antigenically identical. The specificity of the type is inherent in the capsule—by virtue of a complex polysaccharide—each type chemically different.

Avery and Dubois, of the Rockefeller Institute, discovered a bacterium in the cranberry bogs of New Jersey, which produces an enzyme that will dissolve the capsule of Type III. (and only Type III.), in the test tube, and will also prevent the development of this type of pneumonia in the mouse.

Just as quinine is a specific for the malarial parasite, and emetin for the endamoeba histolytica, so there may also be certain metals or simple chemical compounds, specific for one or more of the types.

Serum treatment, so far, has the surest scientific basis in its use in Types I., II., and lately VII.

Most recent reports on the use of serum claim a reduction in mortality

of approximately 50%—the figures in a large group of Type I. cases so treated, being about 15% as against the usual 30%; and in Type II., 20%, as against 40%. These results were obtained when the treatment was given within 72 hours of the onset of the disease, and naturally in that age group, where these types are most common—in young to middle-aged adults.

The mortality figures of the U.S. Army of 10.7% in nearly 7,000 cases of young adults not reated with serum have been already mentioned. In British troops, at Aldershot, prior to serum therapy, the mortality was the same, 10.5%. At the Peter Bent Brigham Hospital, in 262 cases treated with Type I. serum the mortality was 18.7%, but if the treatment was started within three days, it dropped to 9.1%. Of 353 cases so treated, in a group of hospitals, the rate was 19.3%, but if treated within 3 days—12.3%.

The best results recorded for Type I. remedy are obtained from the Rockefeller Institute, by Cole, where in 195 cases, the mortality rate was 9.2% (but the ages are not stated).

In the face of all these figures, it is perhaps too early to say that serum has been proven to decrease the death rate to any great extent.

However, as I said before: there are so many variable factors to be considered in judging results that one hesitates to draw conclusions,—but it is apparently established, where control groups are compared, that Type I. serum and Type II. also, if given within 72 hours, does decrease the fever, the toxicity and the incidence of bacteriaemia, and does lower the mortality.

There are certain obstacles to be considered in the use of serum: (1) There is often the difficulty of obtaining quick information as to type. In answer to this—it is said that more than 50% of young to middle-aged adults with lobar pneumonia belong to the first two types, and so are suitable for serum, without laboratory evidence. (2) Expense is a serious consideration. Usually 100 to 125 cc. of Type I. and more for Type II., are advocated in the first 24 hours. The cost at present is $4.50 per 10 cc. (Connaught Lab.), about $50 for the first day's treatment. This is impossible for many patients. When the State supplies serum free, it will be used more freely. In Massachusetts, a group of 421 cases in small hospitals, and at home, were treated with serum supplied by the Health Department in 1931—the results showing a reduction of more than one-half in the case fatality of Type I. (3) The danger of anaphylaxis, as with any serum, though the new concentrated form gives less trouble than the old.

Ryle, of Guy's Hospital, remarks: "Where there is, broadly speaking, a 4 to 1 prospect of spontaneous recovery and a 1 in 3 chance that the infection is of inappropriate type—we may feel a pardonable disinclination to burden a patient with repeated doses of an intravenous remedy for an indeterminate advantage. On the other hand we cannot put it out of our minds that a certain small percentage of otherwise doomed cases may have the balance tipped in their favor by serum." He states that in previously healthy adults showing a good initial response to infection, and a high leucocytosis, he would feel justified in withholding this remedy. This seems to me to aptly express the situation.

[2]Alkalinization: Have we any scientific facts supporting the use of large doses of alkalies, such as Sodium Citrate gr. xx. every hour? Yes.

Avery and Goebel of the Rockefeller Institute have found that the soluble specific substance Type I. pneumococcus, is an acetyl-polysaccharide, which substance is antagonistic to the antibodies found in Type I. serum. This acetyl-polysaccharide is readily converted by alkalies into its de-acetylated derivative which is a less harmful substance, and only incompletely absorbs the type specific antibodies from serum.

Antibodies are usually not present in the blood of the pneumonia patient until about the fifth day. It would therefore seem good therapy to give alkalies along with the serum.

[3]Intravenous Glucose: This method does supply food material to the often under-nourished heart muscle, and combats acidosis. It may produce some non-specific protein effect. It is thought to cause a tidal-wave of antiferment away from the infected site. It often does afford great relief to the patient.

[4]Oxygen: In pneumonia the oxygen content of venous blood is usually normal, but in the arterial blood, instead of 95% saturation, there is often only 75-80% saturation. The brain cells require more oxygen normally than other cells. Where there is sub-oxygenation of marked degree, even for a comparatively short time, or where there is protracted suboxygenation of even slight degree, delirium occurs and the vital functions become dangerously depressed. When used, it should be given continuously and early. The patient should not be in and out of the tent. There are some disadvantages: One is expense. Another is claudophobia. Sometimes the tent may engender in the patient, the fear that he is extremely ill. Oxygen is loked upon not as a cure, but as a potent aid to recovery.

[5]Creosote: There is no experimental proof of its efficacy in pneumonia, as far as I know, but Beechwood Creosote is an old remedy. Sometimes empirically used substances turn out to have some scientific support.

Kocher believed that creosote was useful in pneumonia, over 20 years ago. In the R.A.M.C. Journal of July, 1933, appears an article from India, on the use of creosote enemata (40 drops shaken in 2 oz. of warm milk—retained about two hours, and given twice in 24 hours, in adults). Twenty-two cases of lobar pneumonia are reported with an 8% mortality.

In the British Medical Journal of Dec. 12th, 1931, there are reported 324 surgical cases treated prior to operation, in this way. None of the 324 developed any post-operative chest conditions. (10% of major operative cases are said to develop pneumonia.)

A friend of mine, Dr. F. G. Miller, practising in Northern Alberta, tells me that he uses this remedy in lobar pneumonia with great success. He employs 1 drachm in oil, rubbed into the axilla. He states that there is always a dramatic drop in the temperature within 24 hours. I have tried it in this way a few times. The temperature did drop after each application.

[6]Quinine: Has a bactericidal effect on the pneumococcus and pneumonia patients tolerate large doses. I believe that there has been no convincing evidence of its worth. It has never been shown that quinine is specific for any organism other than the malarial parasite.

[7]Mercurochrome intravenously: I personally know nothing of its use in pneumonia. Hoppe, Goldsmith & Freeman have reported its use in 90 cases in children with 90 control cases. The mortality in the controls was 32.2% and in the mercurochrome-treated cases 8.9%.

[8]Diathermy: Appears to relieve pleuritic pain, and may be of value when used early.

[9]Potassium Permanganate per rectum: Here I know, we have no real scientific support for its use. If this substance does help, what is the reason? At least the patient receives large amounts of fluids (as does also the patient getting large doses of alkalies). I have always had a feeling that manganese, a catalytic agent, plays some part. Whether or not it is of any definite benefit I can't be sure, and I shall not burden you with impressions, which are more uncertain than statistics.

It may perhaps be eventually found to be worth while against one or more types, and possibly other elements against other types. That this may be considered is suggested by the work of Gelaric and Sabin, who found that in using subeffective doses of serum in Type I. pneumonia in rabbits, that while the mortality was reduced from 100% to 71% yet, if they gave in addition to the subeffective doses of serum, an injection of gold compounds, that the death rate was reduced from 71% to 23%.

I venture to mention 68 cases of pneumonia, treated with Potassium Permanganate by rectum from 1928 to 1930; 36 were lobar pneumonias of all types, and 32 cases of broncho-pneumonia. These 68 cases were of all ages—Lobar, 3 years to 56 years; lobular, 6 weeks to 75 years. Of the 68, seven patients died, a mortality of 10.3% (lobar 11%). If the late, hopeless, and moribund on admission were omitted the mortality was under 5%.

Of the lobar pneumonias typed, eight were of Type II. (none of these died); three were of Type III. (one of these died, aged 60). No patient who was treated within three days of the onset died, except the man of 60 (Type III.) who had been ill for two days prior to admission.

However, with such a small group of cases, one can not draw conclusions.

SUMMARY

1. The mortality figures in lobar pneumonia as usually given seem too high. Probably a 20% mortality is closest to the truth, and between 10% and 20% for young adults.
2. Broncho-pneumonia mortality statistics are too variable and uncertain to make any definite statement based on them.
3. Most of the unusual complications of pneumonia, such as endocarditis, meningitis, peritonitis, occur in about one half of 1% of cases each.
4. Of treatment: antipneumococcic serum against Types I. and II. is based on the surest scientific work.
5. Other forms of treatment are mentioned for what they may be worth.
6. Lobar pneumonia is not uncommon in Vancouver.

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"COMBINED" SURGICAL ANAESTHESIA WITH BASAL AVERTIN ANAESTHESIA

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The title of this paper implies the production of surgical anaesthesia by a combination of hypnotics, narcotics and a general (or local) anaesthetic judiciously chosen and administered in order to produce an optimum anaesthetic effect that is agreeable to both surgeon *and patient*. It will be recalled that an hypnotic is a drug that induces sleep, a narcotic benumbs the consciousness of a painful stimulation, while a general anaesthetic commands sleep and produces anaesthesia to pain together with diminution or loss of reflexes. For many years general anaesthetic agents, alone or in combination, have been used to produce surgical anaesthesia. Their modern use in this manner is, as a rule, quite satisfactory to both surgeon and anaesthetist. However, in spite of expert induction with ethyl chloride or nitrous oxide, many patients dread the emotional and psychic disturbances that not infrequently accompany induction of anaesthesia as well as recovery therefrom. The object of "combined" surgical anaesthesia is to minimize or eliminate this objectionable psychic feature of ordinary general anaesthesia. There can be no doubt in the minds of physicians and surgeons of the importance of eliminating the so-called "psychic trauma" that undoubtedly accompanies many operations as at present conducted.

"Combined" surgical anaesthesia implies a summation effect produced by the judicious and adequate combined administration of several hypnotic, narcotic and anaesthetic agents. For purposes of description the subject is best divided into four sub-sections as:

A.—Preoperative Medication.
B.—The Induction of Sleep.
C.—The Induction of Surgical Anaesthesia.
D.—Avertin Basal Anaesthesia.

A.—*Preoperative Medication*—The purpose of the preoperative medication is threefold: (1) to minimize or eliminate preoperative fear and worry and lack of sleep; (2) to prevent the excessive secretion of saliva and mucus that usually accompanies general anaesthesia; (3) to accomplish the first phase of the "combined" surgical anaesthesia. For this purpose a combination of the barbiturates (veronal, luminal, nembutal) with morphia is usually very satisfactory. Before deciding on the optimum dosage the patient's temperament and general physical condition must be considered, together with the nature of the anaesthetic agent that is to be used to induce surgical anaesthesia.

B.—*The Induction of Sleep*—After the patient has been locally prepared for operation in the anaesthetic room adjoining the operating theatre, he is given a so-called basal dose of avertin (tribromethanol) by rectum. The barbiturates, sodium amytal, pernocton and nembutal, have also been used intravenously for the induction of sleep. Of the three, nembutal, given in twice the sleep-producing-dose (as determined for each patient by actual administration), is the most satisfactory. Compared to avertin, the dosage of intravenous nembutal can be more accurately gauged. However, the simplicity of administration and the early and pleasant awakening from avertin basal anaesthesia makes it the more suitable of the two basal anaesthetics. The administration of the avertin enema constitutes the second phase or the "basal anaesthesia" of our "combined" surgical anaes-

thesia. The details of the avertin administration will be discussed under the sub-title of "Avertin Basal Anaesthesia."

C.—*The Induction of Surgical Anaesthesia*—The patient having received his basal anaesthetic, rectal avertin, will usually fall quietly asleep under suitable environmental conditions in about eight or ten minutes. Although asleep, his reflexes are usually active and he therefore requires the additional administration of some general or local anaesthetic before any surgical procedure is attempted. Even though the dose of avertin given should be too small to induce sleep, the patient will usually have an amnesia for subsequent events.

D.—*Avertin Basal Anaesthesia*—Avertin or tribromethyl alcohol was first introduced as an anaesthetic agent by Willslater and Dinsberg in Germany in 1923. At first it was used to replace rather than supplement general anaesthesia. Used in this way, it was attended by many fatalities. As a basal anaesthetic, however, its use has been unattended by mishap in a series of 1600 cases recently reported by Hans Widenhorn of Freiburg, Germany.

Chemically, avertin or tribomethanol, is ethyl alcohol, with three hydrogen atoms replaced by bromine—C Br_3 CH_2 OH. In pure form it is a white crystalline powder. For convenience of administration it is marketed in solution with amylene hydrate as "avertin fluid."

Indications for the Use of Avertin—In addition to its use as a basal anaestetic, avertin is successfully used as a narcotic to command sleep in cases of intractable insomnia due to pain, etc., to command sleep or amnesia during painful dressings, and as an antispasmodic in cases of convulsions, tetanus, etc.

Contraindications to the Use of Avertin—Its use is contraindicated in patients with poor circulatory, respiratory or hepatic function. It is also contraindicated in acute nephritis, and in inflammatory conditions of the rectum or colon.

The Pharmacodynamics of Avertin—The avertin enema is absorbed rapidly from the colon and is rapidly detoxicated in the liver by combination with glycuronic acid. It is subsequently excreted by the kidneys as urobromic acid. Since absorption and detoxication are coincident events it follows that *the depth and duration of the narcosis will be the resultant of the rate of absorption and the rate of detoxication.*

Loss of consciousness occurs when the blood concentration of avertin reaches 2-3 mg. per cent. as it usually does in 8 to 10 minutes. Maximum narcosis occurs in 20 to 30 minutes at which time the blood concentration reaches 6 to 7 mg. per cent. Greater blood concentrations than this are dangerous. These facts are graphically represented in Fig. I. It is obvious from this chart that the greatest depth of avertin narcosis is reached in 20 to 30 minutes after the rectal injection. The natural conclusion is that, unless avertin is used to "steal" an operation on a nervous patient, it should be administered in the anaesthetic room just prior to the time of the proposed operation.

Important Blood Changes Related to Avertin Administration—(Bourne)—

(a) *acidosis*—Bourne states that a mild acidosis occurs which compares very favorably with that of ether anaesthesia.

(b) *hyperglycaemia*—there is a slight rise in blood sugar which is less than that following ether.

(c) *blood concentration* is less following avertin than it is following ether.

Important Tissue Changes Related to Avertin Administration—(Bourne)—

(a) *kidneys*—from histological studies it is found that there is a mild parenchymatous degeneration of the kidneys after *repeated* avertin administration to dogs.

(b) *liver*—it has been shown that repeated administration of avertin to normal dogs produces only a mild parenchymatous degeneration with occasional slight fatty changes in the liver.

Important Changes in Physiological Function Related to Avertin—(Bourne)—

(a) *kidney function*—in dogs avertin causes an early anuria of short duration which is followed by oliguria and recovery within 4 to 6 hours, after which the urea test shows that the kidney function soon returns to normal. In man there is no evidence of marked depression of kidney function.

(b) *respiratory function*—the respiratory centre is depressed only slightly when basic doses of avertin are used.

(c) *circulatory function*—avertin in much greater concentrations than are used in basic anaesthesia in man produce no deleterious effects upon the heart. In still greater concentrations it slows the heart and diminishes the peripheral output.

(d) *hepatic function*—by employing the brom-sulphalein test it has been shown that normal dogs suffer slight and transient but no delayed liver damage and in normal humans there is no dye rentation when basic doses of avertin are employed.

Technique of Avertin Administration—As already stated, in the early days of avertin usage in Germany large doses of 150 and 200 mg. per kilo. were resorted to in an ill-advised attempt to secure complete surgical anaesthesia. Avertin, like sodium amytal, and nembutal, is a hypnotic and only produces surgical anaesthesia in toxic doses. Now that avertin has been used as a basal anaesthetic only, in maximum doses of 100 mg. per kilo. of body weight, it has come to be regarded as a safe and useful addition to our anaesthetic armamentarium. In old or debilitated patients the basic dose is advisedly decreased.

Before preparing the avertin enema, the patient's approximate weight in pounds must be ascertained. By multiplying this figure by the constant, 1.5, a product is obtained *which represents the number of cubic centimetres of a 3 per cent. solution of avertin which constitutes the maximum basal dose for that individual.* The avertin solution referred to is made by adding "avertin fluid" to distilled water kept at a constant temperature between 95 and 104 degrees F. If the temperature of the avertin solution is raised above 104 degrees F. an irritating compound, dibromacetaldehyde may be formed. Before administration, the avertin solution is to be tested to prove the absence of this irritating dibromacetaldehyde by adding a drop or two of Congo Red. A change in color of the dye from red to blue is positive indication of the presence of dibromacetaldehyde and the solution must be discarded.

The actual rectal injection is accomplished with an urethral catheter and a 50 cc. Luer syringe or a funnel. The proper rate of injection is that required leisurely to fill and refill the Luer syringe, i.e., about 3 minutes. There is no difficulty as far as the retention of the avertin enema is con-

cerned if the patient has received an ordinary preoperative dose of morphia. Even without morphia, the enema is rarely expelled. A preliminary cleansing enema is desirable, but unnecessary in emergency cases.

Complications of Avertin Anaesthesia—There is commonly a drop in the systolic blood pressure of 30 or 40 mm. Hg. after avertin administration. If, owing to a relative overdose or idiosyncrasy for the drug, circulatory or respiratory depression should occur, the immediate administration of 5 per cent. gluco-saline intravenously is, according to Sebenning, the best emergency treatment. Widenhorn suggests the intravenous use of 6 cc. of 25 per cent. aqueous solution of coramine in such emergencies. Sebenning states that untoward reactions notably diminish with experience in the use of avertin.

DISCUSSION

A thoughtful and wise surgeon will be as careful to avoid the infliction of "psychic trauma" on his patients as he is careful to avoid unnecessary shock-producing visceral traction during a laparotomy. It can not be doubted that the incidence of either form of trauma are factors in the production of a degree of surgical shock, although the culpability of the psychic form of trauma is not as apparent as the physical trauma incident to excessive or rough visceral manipulation. Although many good surgeons will doubtless disagree with the writer on this point, I am sure that there will be unanimity on the proposition that *if a type of surgical anaesthesia can be devised that minimizes the marked antipathy that characterizes the attitude of the majority of patients towards surgical intervention, such an anaesthetic combination is an undisputed boon to the surgeon, the anaesthetist and, most important of all, to the patient.*

Theoretical considerations and practical experience both indicate that a moderate quantity of several hypnotics, narcotics, and anaesthetics, wisely chosen and suitably blended to produce surgical anaesthesia makes a more adaptable and pleasing anaesthetic experience.

SUMMARY

A suitable blending of various well-tried hypnotics, narcotics and anaesthetics is herein recommended as the most pleasing and easiest method of attaining surgical naaesthesia.

WHAT IS GOING ON IN THE WORLD

By H. L. M. *in The American Mercury for March, 1933*

(Concluded from March issue)

Nor as a good many otherwise sensible doctors have apparently come to think. They have, in their charity, allowed themselves to be imposed upon in a gross and shameless manner. They begin by giving free treatment to persons whose inability to pay for it is only too obvious, but bit by bit they find themselves facing larger and larger hordes of dead-heads, until in the end, at least in certain fields, there are precious few pay customers left. The public schools, now in process of rational liquidation at last, have led in this movement, but the public health uplifters have followed hard upon their heels. The dubious doctrine that what ought to be done must be done has been converted into the even more dubious doctrine that what ought to be done must be done free, and as a result great multitudes of Americans, hitherto willing enough to pay their way, have been converted into mendi-

cants, and a large part of the burden of their mendicancy has been thrown upon the medical profession.

There is, as a matter of fact, no plausible reason for arguing, as uplifters always do, that the privilege of first-rate medical care is a right that every free-born American acquires at birth, regardless of his merits or his means. It is nothing of the sort. Charity is not a franchise; it is only a favour, and it is a favour properly offered to the really helpless, and to no one else. It may impose upon the benefactor something that he chooses to regard as a duty, but it certainly gives no vested right to the beneficiary. In this region, as in others, sentimentality is a potent weapon in the hands of uplifters. They are adepts at convincing their betters that what they think ought to be done is ordained by God, and cannot be evaded without a grave breach of decency. But though they know how to win customers for that idea, it remains nonsense all the same.

Thus the doctors are beset by uplifters on the one side, as they are beset by quacks on the other, and it is no wonder that they begin to be concerned about the future of their trade. The report of the Committee on the Costs of Medical Care has shaken them mainly because it seems to show that the uplift is beginning to invade their own house. But the truth is that it has been there for a long while, and with their own innocent connivance. If they were converted into public job-holders tomorrow, as the committee proposes, they would scarcely be much worse off than they are in many an American community today, with free dispensaries taking half of their patrons away from them, and luxurious hospital-hotels bankrupting the rest, and so leaving nothing for their own fees.

Just how they are to get out of these difficulties I do not know. My gift for constructive criticism is indeed somewhat meagre. But two or three devices to the desired end are so obvious that even one who tears down without building up may discern them. One of them is to undertake a more bilious scrutiny of applicants for free service, and of agencies which seek to provide it. The doctors have let the public health and public schools schemers run away with them. They should have resisted this movement vigorously, as the lawyers in like case would have certainly resisted it, but in only too many American communities they have helped it on, thus acquiescing idiotically in their own destruction.

In particular, the magic words, preventive medicine, have upset them, and led them into transparent follies. The first duty of a doctor, in prevention as in cure, is to his own patients, and not to a vague and miscellaneous mass of people who ought to be other doctors' patients. The limits of prevention are fixed by Nature, and within the limits of private practise they are plain enough, but when a medical man succumbs to uplifters and begins to rove the wide pastures of Utopia he sometimes loses all contact with fact, and begins to talk as foolishly as the uplifters themselves. If all the health departments ran as wild as the schools were lately running, and every crazy scheme to abolish death were in full operation, people would still continue to die. The postponement of that event can never be achieved so effectively by public functionaries as by private practitioners. The man who can really manage it, in so far as it is possible at all, is the family doctor, and he will succeed in proportion as he devotes himself to his actual patients, and lets the rest of humanity take care of itself.

Both the report of the Committee on the Costs of Medical Care and the caveats of those members who dissent from it lay great stress upon the

importance of this family doctor. He has been forced into the background of late by the specialist, and even more by the encroachments of state medicine. The committee proposes to save him by attaching him to a hospital and making a sort of minor bureaucrat of him. But this, manifestly, would not help him. On the contrary, it would widen still further the breach which now opens between him and his patients, and make him still more the satellite of the specialists. The way to restore his old importance is to restore his old functions, and that is certainly not going to be done by transferring even more of his patients to hospitals.

What is needed, I suppose, is a revival of the home care of the sick. In some part, of course, it must be impossible, for there are not a few medical situations in which, considering modern methods of treatment, home care would be almost equivalent to no care at all. But the number of such situations is probably considerably smaller than most laymen have come to think. A competent doctor is still capable of taking care of the overwhelming majority of his patients without lodging them in an expensive hotel, and if he had well-trained midwives and practical nurses to help him he could probably look after many more.

In this department, as both the majority and minority of the committee say, there has been bad planning. The hospitals have trained so many nurses that there is now an enormous over-supply of them, but they have been trained for hospital work, and are far less useful elsewhere than they ought to be. If there were a large body of nurses especially instructed in the care of patients at home there would be less tendency to seek hospital care for every trivial sore throat or sore thumb, the cost of illness would be very materially reduced, and there would be more money left for the doctor's bill.

In all this, I may seem to be venturing to tell the medical granddams how to suck eggs. If so, I apologize most humbly. My excuse is that the report which now disturbs them is addressed, not to the profession only, but to the general public, and that its recommendations, if carried out, would make every American his brother's keeper with a vengeance. That they lie within the range of practical politics I doubt seriously; the movement, indeed, has begun to turn in the other direction, and I hope to see the day when health departments are restored to heir proper business of dealing with *general* menaces to the peoples' health, and free medical service is restricted to the actually indigent. (I begin to be so optimistic, indeed, that I even look for the day when the public schools will be confined to teaching the three *r*'s to the children of the poor, and all their present costly soarings will be only a dream dimly remembered.)

But though the doctors thus seem to run no hazard of being converted into robots operated by politicians, as they might be if the committee's recommendations were put into thoroughgoing execution, they still face a very unpleasant professional situation, and it is no wonder that they discuss it in some alarm. Their remedy, as I have ventured to hint, is probably in their own hands. If, on the one side, they will unite in a genuine effort to throw off the uplifters who now victimize them, and on the other side try to rid their customers of the grotesque idea that being ill is a romantic business, and an excuse for the indulgence of levantine luxury and the waste of a great deal of money, most of it not in hand—if they will proceed realistically in both of those directions they may conceivably throw off some of the difficulties which now beset them.

I confess that it always irritates me to hear medical men denounced as

prehensile, as is often done, not only by quacks, but also by persons who should know better. They are actually, with very few exceptions, fellows of a vast and innocent sentimentality. The great majority, indeed, might be described with perfect accuracy as easy marks. The men of no other profession are so facilely operated on by specialists in other people's duties. They walk into the arms of every new uplifter who happens down the road. My hope is that the report of the Committee on the Costs of Medical Care, with its bald proposals to reduce them to a kind of peonage, will at last awaken them to the fact that they also owe some duties to themselves, and that, with everything else equal, the more they regard those duties the better they will be able to serve their actual patients.

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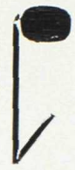

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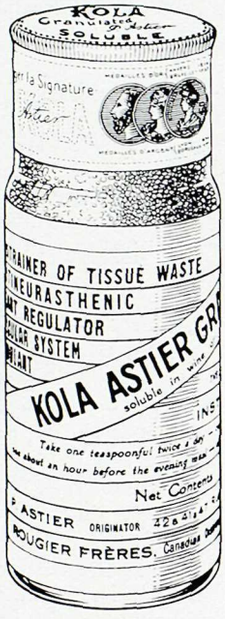

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In discussing the treatment of decomposition, Feer says: "The period of repair may be shortened by giving suitable additional food; the best, probably, being buttermilk to which carefully regulated proportions of dextrin and maltose preparations or malt soup are added."—*E. Feer: Text-Book of Pediatrics, J. B. Lippincott Co., Phila., 1922, p. 284.*

In the treatment of infantile atrophy, Fischer recommends the following: "The carbohydrate should be increased by gradual addition of dextrimaltose.

"Malt soup or dextrimaltose (Mead's) should be added in teaspoonful or more doses to each feeding until the point of carbohydrate tolerance is reached."—*L. Fischer: Diseases of Infancy and Childhood, F. A. Davis Co., Phila., 1925, V. 1, p. 285.*

Grulee, discussing treatment of decomposition, observes: "As a rule it is best to start with 2 to 2½ or 3 ounces of albumin milk to the pound weight in 24 hours; the sugar to be added is in the form of a maltose-dextrin mixture. One should never delay too long in adding this."—*C. G. Grulee: Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 265.*

Referring to the hypotrophic infant, Herrman writes: "In mild cases, the addition of dextrimaltose instead of cane or milk sugar may be sufficient to obtain a gain in weight."—*C. Herrman: The treatment of nutritional disorders in artificially-fed infants, New York M. J. 114:158-160, August, 1921.*

In discussing artificial feeding in athrepsia, Hess states: "The carbohydrates are usually added in a slowly fermentable form, such as the maltose and dextrin compounds, which are usually started by the addition of four grams per kilogram (1/15 ounce per pound) and increased until eight grams or more per kilogram (¼ ounce per pound) of body weight are added."—*J. H. Hess: Feeding and the Nutritional Disorders in Infancy and Childhood, F. A. Davis Co., Phila., 1928, p. 278.*

Concerning the treatment of marasmus, Hill says: "When the stools have become smooth and salve-like, carbohydrate, in the form of dextrimaltose, may be gradually added up to the limit of tolerance."—*L. W. Hill: Practical Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 281.*

"A spasmophilic baby on bottle feeding should receive a limited amount of milk—a pint, or at the most 24 ounces in the 24 hours—to which cereal gruel and some form of sugar is added, preferably one of the malt dextrin preparations; also the early addition of other foods than milk to the baby's diet."—*M. Jampolis: Infantile spasmophilia, Interstate M. J. 25:652, Sept., 1918; abst. Arch. Pediat. 35:691, Nov. 1918.*

With reference to the treatment of diarrhea, Lust writes: "After several days, 2% to 3% of a maltose-dextrin preparation may be added (Dextri-Maltose). This is preferable to the easily fermentable lactose or cane sugar."—*F. Lust: The Treatment of Children's Diseases, J. P. Lippincott Co., Phila., 1930, p. 145.*

"The treatment of artificially fed children in the first of these groups consists in putting them on a low fat dietary, and giving them carbohydrate in the form of one of the less fermentable sugars—e.g., dextrimaltose."—*L. G. Parsons: Wasting disorders of early infancy, Lancet, 1:687-694, April 5, 1924.*

Pearson and Wyllie in discussing the treatment of milder cases of inanition say: "Regulation of this disturbed organismal balance is obtained by the addition of carbohydrates, while fat and casein are reduced. For this purpose dextrimaltose and flour are better than the ordinary sugars, since they are more slowly absorbed and have greater efficacy in their powers of controlling the flora in the large intestine."—*W. J. Pearson, and W. G. Wyllie: Recent Advances in Diseases of Children, P. Blakiston's Son & Co., Phila., 1930, p. 116.*

Regarding the treatment of the marantic infant, Raue states: "After the intolerance to sugar has been overcome a carbohydrate, preferably Dextrimaltose, may be added."—*C. S. Raue: Diseases of Children, Boericke & Tafel, Phila., 1922, p. 427.*

In discussing the treatment of atrophy, Thursfield and Paterson, state: "If the baby continues to improve, the next step in the treatment is to add to the milk one of the less fermentable carbohydrates, such as dextrimaltose; . . ."—*H. Thursfield, and D. Paterson: Diseases of Children, William Wood & Co., 1929, p. 105.*

"I also find dextrin-maltose an excellent addition to albumin-milk when the first object of that food has been achieved and a gain in weight is desired; in this way I have succeeded in feeding albumin-milk far beyond the period usually advised, with highly gratifying results."—*F. L. Wachenheim: Infant-Feeding; Its Principles and Practice, Lea & Febiger, Phila., 1915, p. 158.*

"Dextri-maltose has been substituted for lactose not infrequently, when the tolerance for the latter continues low."—*J. H. West: Low fat, high starch evaporated milk feeding for the marasmic baby, Arch. Pediat. 48:189-193, March, 1931.*

"Malt sugar is indicated when others fail to produce a sufficient gain, or when malassimilation of fat is evident."—*O. H. Wilson: The role of carbohydrates in infant feeding, Southern M. J. 11:177, March, 1918; abst. Arch. Pediat. 35:447, July, 1918.*

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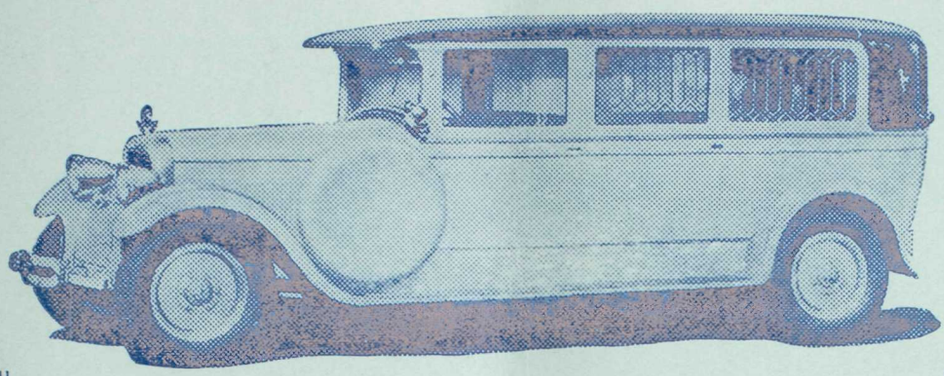

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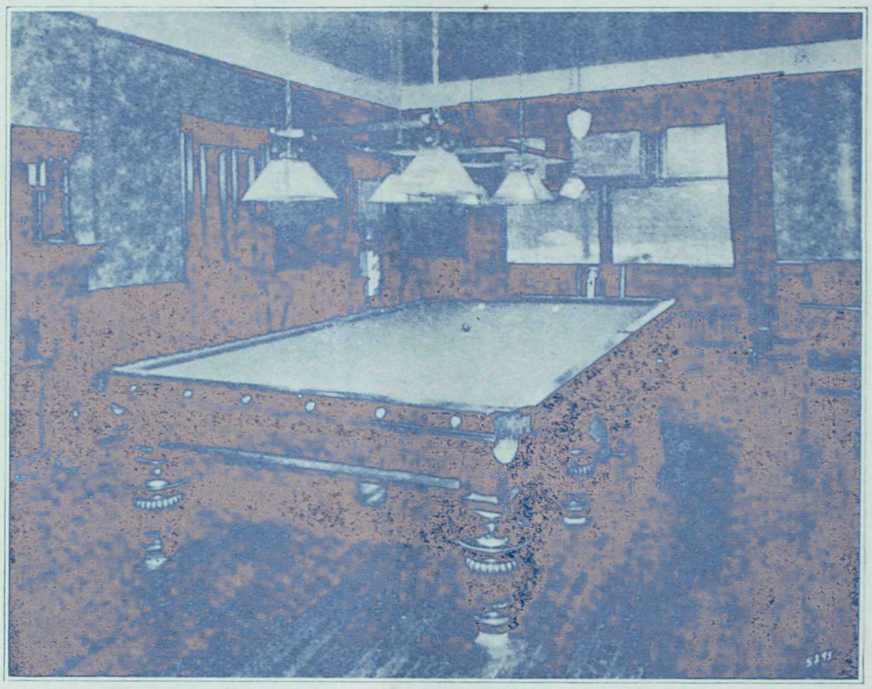

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