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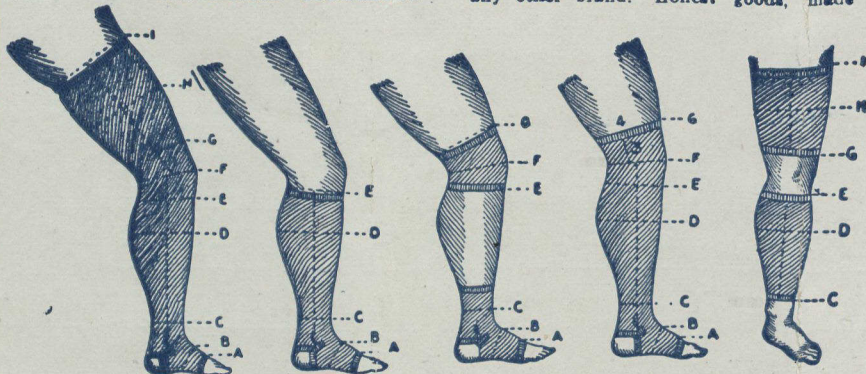
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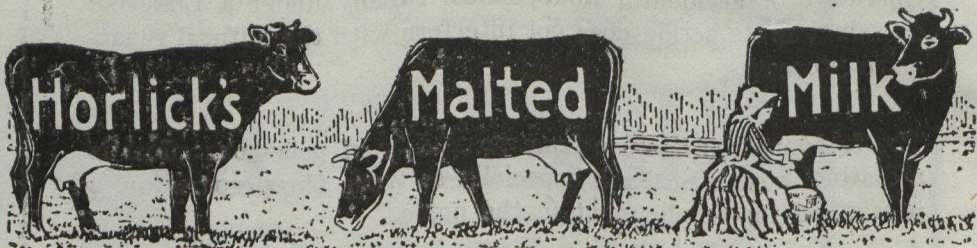
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A Monthly Journal of Medical and Surgical Science, Criticism and News

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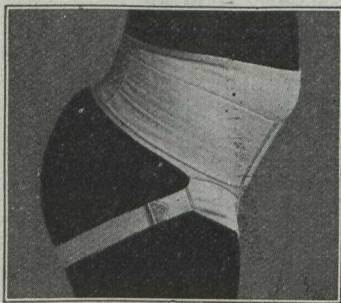
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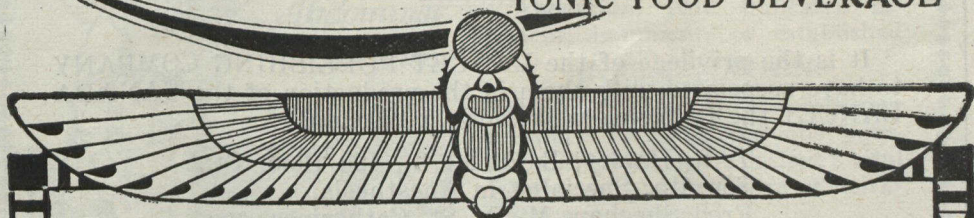
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Due to a strike of all the printing trades in Toronto, we were unable to publish the CANADA LANCET for June. July issue was produced under difficulties, but August sees our regular schedule resumed. We anticipate no further delays due to this cause.

Every subscriber to the CANADA LANCET will be dated one month ahead to make up for the missing June issue.

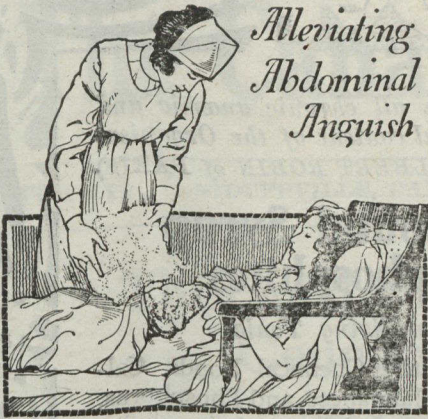
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VOL. LVI

STOUFFVILLE, CANADA, SEPTEMBER 1921

NO. 1

The Good Old Days of the Country Doctor.

(The Toronto Globe.)

THE old-fashioned country doctor passes to his reward. Brief despatches from little out-of-the-way places chronicle his demise. Four such have appeared in the newspapers during the past few days. Two told of services extending over fifty years. Yet he lives—in memory, in story, in tradition. He leaves little—and much; little of the world's goods, much of the world's greatness. He is the hero of Luke Field's immortal picture—the serious, silent figure sitting in the lamplight by the bedside of the fever-stricken child. Thousands of Canadians know him. He was often a character—hale, hearty and impetuously outspoken, but very human and very sympathetic. He came close to those to whom he ministered. He understood. He shared with the preacher the intimate confidences of fathers and mothers, or sons and daughters. At all hours of day or night, in all conditions of weather, over roads that were rough, or miry, or deep in drifts—when miles were miles not translated into rods by the modern motor—he drove to the scattered homes of his patients, and often through the long, dreary hours of darkness wrestled in earnest fervor with the Angel of Death.

Times are changed. The modern doctor is different. He diagnoses and prescribes, and delegates the mid-night vigil to a capable nurse. With an efficiency that destroys romance, in order to save life the modern doctor converses and concentrates his energies where they will do most good. Instead of waging battle single-handed he rallies all the legions of science to his support. Nevertheless, as The Chatham News recently stated in paying its tribute to one of them, the "good old doctors" of other years did wonderful, heroic work. They united a profound devotion to the highest ideals of their profession with a singularly deep and comprehensive sympathy. They will not soon be forgotten. And from their ranks with the advance of science, have been recruited some of the greatest physicians of the modern school.

The Deleterious Effects of the Bromide Treatment in the Diseases of the Nervous System.

By Edward Livingston Hunt, M.D.

IN this paper I wish to discuss the dramatic and disastrous symptoms which result from the use of the bromide salts in the treatment of nervous diseases. By these I do not mean the rash, the cachexia, the feebleness, and the depression, but the confusion, the restlessness, the violence, and the syndrome of symptoms resembling mania and paresis.

Bromide is a remedy so constantly used and so constantly abused that it will not be out of place first to call to your attention just what are its effects upon the nervous system.

"Bromide", according to Hare "affects the brain, cord, and peripheral nervous system. It slows the development of thought, decreases the excitability and power of the motor cells of the brain, and is a distinct depressant to the mental and intellectual portions of the cerebral cortex. Upon the cord it exerts a marked sedative effect so that reflex action is decreased. Motion is maintained after sensation to pain and reflex action is lost. In this way damage is done without either patient or physician being alive to the fact. It also depresses the peripheral parts of the sensory nerves."

The results upon the peripheral nervous system are slight and infrequent as compared with those upon the cord and these in turn are neither so severe nor so frequent as are those upon the high

er centers. The areas of the cortex are very greatly depressed, as Bastedo has proven by his experiments. He found that in the case of a bromidized dog it was impossible to produce convulsions by the artificial stimulation of those cortical areas.

There are several conditions in the nervous system in which the bromide salts are used. It would take much more time than I have at my disposal this afternoon to consider each one. I propose, therefore, to say a few words about some of the most frequent. I shall speak of the use of bromide in the following eight conditions: (1) Epilepsy, (2) toxic cases, (3) mental conditions, (4) traumatic and arterial conditions, (5) cases requiring long continued use of the drug, (6) alcoholic cases, (7) cases with an idiosyncrasy, (8) cardiac cases.

1. Epilepsy. It has long been recognized that there are certain types of epilepsy in which the use of bromide aggravates both the irritability and restlessness preceding the seizure as well as the depression following. Observers have reported cases of idiopathic epilepsy of long standing in which the administration of even moderate doses of bromide controlled the convulsions but substituted for them confusion, furor, violence kleptomania, delusions, and homicidal tendencies. Weir Mitchell described such a case in 1887. The

patient was an epileptic of many years' duration. Inasmuch as moderate doses had reduced the attacks, the attending physician reasoned that larger ones would stop them. As a result the bromides were increased until the patient was taking 150 grains a day. The patient became thoroughly intoxicated, the eyes partly closed, the sphincters relaxed, and the jaw dropped, emitting a constant drool of saliva. The major symptoms ceased but the minor ones increased. The mind became profoundly affected so that the patient was hard to arouse, indifferent and imbecilic. Allen Starr reported another such case in 1896. His patient, under the administration of moderate doses of bromide, developed symptoms of violence and mania. In this instance a withdrawal of the drug produced a complete cessation of the maniacal phenomena with a return of the epileptic seizures.

I have seen the same condition. A young man, who had suffered from epileptic convulsions for many years, required 60 grains a day of the bromide salts to arrest the attacks. If he continued this dosage over a long period of time he would become confused, irritable, unreasonable, and violent. On one occasion he attacked a fellow workman. So soon as the bromides were reduced his mental symptoms abated.

It is in keeping with these facts that Shanahan, the superintendent of the Craig Colony, makes this statement in regard to the use of bromide in the treatment of epilepsy, that "bromide, when properly given, with due attention to combating the evil effects,

brings about material improvement in carefully selected cases of epilepsy."

It seems to be the epileptic cases of long standing which show an especial antagonism to the excessive use of the bromides. I believe that the irritability of temper displayed by these long-standing epileptics is as much, if not wholly, due to the constant and excessive use of bromides as it is to the disease. In the administration of bromide in epilepsy, therefore, one should exercise caution, judgment and moderation. A patient should never be saturated, and the presence of unusual irritability, confusion, or violence should be the signal for a decrease in the dosage. At the present time when luminal has given such brilliant results in controlling the convulsions of epilepsy, it would seem that the administration of bromide in this disease would soon become obsolete.

2. Toxic Cases.—The toxic and exhaustion cases react unfavorably to the administration of bromide. They are suffering from lowered resistance and impaired nutrition, therefore, what to an ordinary individual might be an average dose of bromide, becomes to one of these patients a dangerous dose. A careful investigation and an exhaustive history of these patients will prove that in nearly every instance the mental symptoms of confusion, delirium, and mania, either made their appearance shortly after the administration of bromide, or were greatly aggravated by it. I remember one such patient where fatigue and insomnia were followed by sedatives, hypnotics, and finally steady and

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progressive doses of bromide. Shortly after the patient was said to be developing a psychosis with symptoms of confusion, irritability, restlessness, mania, and suicidal tendencies. In this connection I might mention the post-operative cases. These have slightly lowered resistance, amorexia, weakness and insomnia. To help them bromides are given, at first in small, later in large doses. At the end of a few days maniacal symptoms appear. I can recall two such post-operative cases, seen in two of the best known hospitals in New York. These patients had been unable to sleep. After the first night, when morphine had been given, resort was had to bromide. The dose had been gradually increased until maniacal symptoms appeared. It is not uncommon for physicians to administer forty grains of bromide four or five times in twenty-four hours and to continue this for several days. Such dosage invariably ends in symptoms of bromidism. A short time ago I saw a post-operative case that had been given 1400 grains of bromide in one week. All of these patients developed the same type of symptoms—confusion, delirium, delusions, great restlessness, and violence. The onset of the maniacal symptoms appears to be sudden and as is always reported “the symptoms became worse in spite of 60 grains of bromide given every night.”

3. **Mental Cases**—Mental cases are susceptible to bromide intoxication. This is due to the fact that these patients are suffering from a long drawn out condition, that their nervous system is vulnerable, that their resistance is lower-

ed, and that their cerebral circulation is poor. The anxiety, restlessness, and insomnia so frequent in mental conditions has required the constant administration of sedatives and therefore, these patients are mildly toxic. Bromide is frequently given in these cases, at first in small and finally in large doses. As the symptoms fail to abate the dosage of the bromide is increased and as the symptoms augment is again increased. Finally a condition of bromidism is induced on top of the existing mental condition.

I remember not very long ago seeing a patient who was very confused, delusional, and restless. She had a foul breath and coated tongue, there was a tremor of the hands, the gait was ataxic and the Romberg symptom was present. The pupils were sluggish and dilated. She was garrulous and incoherent. Naturally, the tentative diagnosis was paresis. She was sent to a hospital for diagnosis. The blood and spinal fluid were reported negative. I decided to keep her under observation. Her confusion began to subside. She became less tremulous and less talkative. There was evident improvement. In a few days more she began to walk and the Romberg symptoms disappeared. In two weeks this patient changed completely. All her parietic symptoms disappeared. A careful investigation, together with admission on the patient's part, revealed the fact that she had been depressed for months and unable to sleep. She had obtained a prescription for bromide, which she had taken constantly whenever she felt nervous, and gradually had

become intoxicated.

4. Traumatic and Arterial Conditions.—I have had no personal experience with traumatic cases and bromide dosage. Weir Mitchell, however, cited a case of a man injured in a railway accident, who took bromide to relieve insomnia. His physician advised him to stop and later on, thinking that he had obeyed him, prescribed small doses of bromide. Soon the patient developed irritability of temper, confusion, and violence. It was not for some time that it was discovered that he was getting the double dose of bromide. A complete stoppage of all drugs caused an abatement of his symptoms and a return to a normal state.

It is to be expected that patients suffering from arterial changes would be peculiarly susceptible to bromide as they are to all kindred drugs.

5. Bromidism from long continued use of bromide, after the discontinuance of the drug.—There are a certain number of instances in which the diagnosis of bromidism is made and, even after the drug is stopped, the mental symptoms persist. These cases are confusing. The reasons for their occurrence are twofold: (1) the slow elimination of bromide and (2) the fact that bromide is stored in the tissues in depots so that long after the drug has been stopped, the patient is still being intoxicated as he is drawing upon his bromide reserve. So slow is the elimination of bromide that it has been discovered in the urine a month after the administration of the drug has been stopped. Simanowsky found traces of it in the

urine of a dog four months after stopping bromide.

6. Alcoholic Cases.—Alcoholics are susceptible to bromide intoxication. They of course are already toxic, have poor circulation, and suffer from lowered resistance. The drug should be given them with great caution. It is, however, constantly administered, both in large and frequent doses. Two years ago I saw a patient in a maniacal condition, noisy, confused, and violent. She had been drinking slightly but over a long period of time. Finally, when depression and insomnia developed, she consulted a physician, who prescribed bromide. She had the bottle constantly refilled and whenever tired or depressed took a teaspoonful. Gradually there developed confusion, violence, mania, and then delusions. Her condition was not recognized. It was impossible to know that she had been taking the bromide, so to quiet her more bromide was given. This patient became more noisy and violent than any of the other bromide cases that I have seen. She became suicidal and at one time swallowed a large diamond ring. There were no untoward symptoms and the ring was passed and recovered two days later. Withdrawal of all medication from this patient resulted in a complete recovery.

7. Idiosyncrasy.—There are, of course, certain persons who display an idiosyncrasy to bromide. These develop the same train of symptoms. just why one man can take forty grains daily and another cannot is difficult to explain.

8. Cardiac Cases.—Da Costa first called attention to the fact that while the bromides do not

generally disturb the circulation they may do so when certain functional failure of heart force exists. In a few of these cases of chronic heart disease not only do small doses of bromide depress and enfeeble the heart, but if long continued cause the parietic symptoms so common in this condition.

The symptoms of bromidism are therefore two-fold: (1) Physical and (2) Mental.

1. The **Physical Symptoms** are the rash, the coated tongue, and fetid breath, constipation, cachexia, feebleness, an excessive flow of saliva, and, if the condition is aggravated, an ataxic gait, a loss of patellar reflexes, tremor, and an ataxic speech.

2. The **Mental Symptoms** are restlessness, insomnia, depression, later excitability, confusion, delusions, and hallucinations.

The conclusions to be reached from this little study are

1. That bromides are very far from harmless.

2. That their prolonged administration will give rise to both physical and mental symptoms, the latter a condition akin to paresis.

3. That they tend to aggravate the irritability and mental deterioration in long standing cases of epilepsy.

4. That toxic cases develop more rapidly upon the administration of bromide.

5. That circulatory, traumatic, and arterial cases are peculiarly susceptible to their administration.

6. That bromide may mask the symptoms of mental disease just as thoroughly as does opium in surgical conditions.

7. That mental and alcoholic cases are peculiarly susceptible to bromidism.

Alberta Medical Association Meets at Calgary.

That the medical profession had stood too much apart and had not shown the men and women of the country the scientific principles on which it was based; that this should be put before the sane business man of to-day in its proper light was the statement of Dr. Franklin Martin, of Chicago, at the annual banquet of the Alberta Medical Association. In no uncertain terms Dr. Martin described the antivivisectionists societies as being 'damnable organizations'

and further stated that if a family physician took hold of a woman who had developed a sentimental sympathy along this line, he could persuade her she was an idiot in ten minutes by presenting to her the facts.

The banquet was held at the conclusion of the first day's session of the association's annual meeting, held in conjunction with the Clinical Congress of the Alberta section of the American College of Surgeons, Dr. D. S. Macnab

president of the Calgary Medical Society, was in the chair. Dr. C. Hunter, of Manitoba University, and Dr. Thomas L. Gilmer, dean of oral surgery, Northwestern University Dental School Chicago, were among the speakers. In the course of his remarks, Dr. Gilmer said that he hoped to live to see the day when dentistry and medicine would again come under one heading.

Profession Is Panicky

"The question arises in my mind," said Dr. Franklin Martin, in the course of his remarks, "if the medical profession is not taking itself too seriously to-day. The whole world is in a state of transition and I believe that the medical fraternity is a little panicky. The profession has been too much to itself and has not pictured to men and women the ideals of the science of medicine. The men of to-day will not stand for the 'blue sky tactics,' they will not stand for quacks. They realize that their own business cannot be run on these principles."

The speaker went on to emphasize the need of impressing the layman with the fact that there was a scientific reason for everything done by the medical profession. "The American College of Surgeons," he said, "is determined to make people know the scientific basis of the profession—we want them to know the benefit of perfect drinking, eating, water supply sanitary conditions (and remember that it was the work of scientific medicine in sanitary matters that made the completion of the Panama Canal possible.)"

Defends Vivisection

"People should be made to know that anti-vivisection societies are damnable. If these experiments were not performed on animals they would have to be tried on human patients." The speaker went on to criticise the "quack" advertisements which appeared in news papers. He said that the medical men could stop this if they made it sufficiently clear that these things were doing a great harm.

He then told of the work which the American College of Surgeons had done in standardizing hospitals in the United States and Canada. Nothing was as important as this, he said, to the surgeon and the physician. This year they would report that about 500 out of a total of 625 hospitals in the United States and Canada, containing over 100 beds, had adopted their standardized system of keeping case records. A similar work was being accomplished among the smaller institutions.

Speaking of the "difficulties" which had been experienced with nurses, Dr. Martin said:

"There have been many cases where nurses have been influenced by the ideals of trade unionism. They are running after the strange dog called the eight hour day. You can make them see that this is a mistake." He said that they were recently asked in the States if they were going to drop from the high position which they held. "Take the nurses into your confidence, as you should the business men and show them," was his concluding remark.

Attempt Greater Unity

Dr. Martin said that there was a

great bond in the profession between Canada and the United States. He spoke of the attempt on the part of the American College of Surgeons to make a closer connection with the surgeons of South America. In the countries of that continent, he said, were to be found some of the finest surgeons in the world.

The Toast List

Dr. D. S. Macnab led off the toast list of the evening with the toast to the king, which was followed by "Our Legislators" proposed by Dr. D. R. Dunlop and responded to by Alderman J. W. Huggill, representing Mayor Adams.

In proposing the toast to "Our Visitors," Dr. William Egbert, president of the Alberta Medical Association, spoke of the fine addresses which the doctors had listened to at the meeting on Tuesday morning and afternoon. He spoke briefly of the work which the association was trying to do to improve the conditions under which the profession worked in this country—for the doctors and particularly for the patients. In this they had achieved no little measure of success. The Dominion organization was now taking this work up.

"I regret," he said, "that some of our men, particularly in the city, not taking the interest they should in the reorganization of the profession in this province. The country men are making a fine response. Why is this so? surely it is not fair for them to leave it to a few. When it is seen what work we have accomplished, surely it is not possible to hold back."

In Lighter Vein

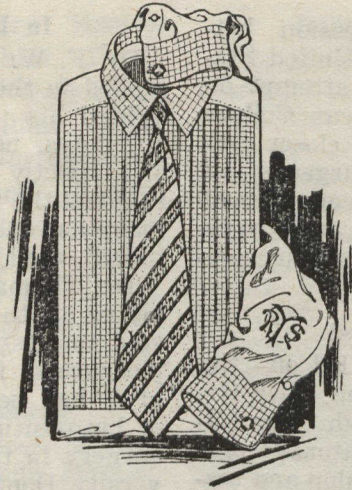
Dr. F. W. McManus, of Bashaw replied in the lighter vein and delighted his audience with racy anecdotes, not all of which were of a strictly professional turn. He thanked the Calgary men for their reception and expressed a wish that it would "happen again."

Dr. Thomas L. Gilmer also replying to this toast, spoke of his visit to western Canada and his pleasure in finding that his ideals of it had been fulfilled. Speaking of his position as the dean of oral surgery in the Northwestern University Dental School, Dr. Gilmer said that he stood between the medical and the dental profession. "I hope to live to see that day," he continued, "when medicine and dentistry will unite. There was a time when this was so. The dentist to-day needs to know more about medicine and, you will pardon me saying it, but the medical men need to know more about the diseases of the mouth."

Compliments Alberta

Dr. C. Hunter, of Manitoba university, Winnipeg, paid the Alberta medical profession a compliment for the strides which they had made in their organization work. Their appointment of a permanent secretary had been watched with interest in his province and the medical profession there were following the example set here. He said they were beginning to realize the effect of the work accomplished. The programme wound up with the toast to "The Ladies", proposed by Dr. W. W. Upton and responded to by Dr. T. J. Costello.

The afternoon session of the con



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vention was taken up with addresses of technical subjects, by local and visiting authorities. Dr. W. Merritt, of Calgary, led a clinic on "Nervous Diseases"; Dr. N. McPhatter, Calgary, read a paper on

"Ectopic Pregnancy"; Dr. C. Hunter gave an address on "Psycho Neurosis and Analysis," and Dr. D. B. Leitch, of Edmonton, "Chronic Intestinal Indigestion of Children."

Remarks on the Primary Treatment of Accidental Wounds in Relation to the General Practitioner.

Joseph A. Manzella, M. D.

I ADDRESS you gentlemen with a feeling of helpless dissatisfaction, conscious of a task of some difficulty; to present an unbiased, unprejudiced opinion based upon facts so presented that a reasonable conclusion may be reached. I've thought of the heaps of medical journals and the many rows of text books in libraries, and wondered how much was there of real value, real facts, how much there was of personal opinions, distorted facts, and wrong conclusions. I recalled reading recently a paper written by an eminent surgeon wherein his strong statement of apparent fact and conclusions was strongly and vigorously disputed by an equally eminent surgeon in his discussion. I've turned from one text book to another and found conflicting opinions upon a subject, stated as undisputed facts. I have listened to a professor teach that a certain procedure was ideal and another emphatically declare to the contrary. And then down to the general practitioners and ourselves we have probably all experienced the bewildering differences of opinion occurring in our daily

practice, and which often make us skeptical and intolerant. Indeed, at times, I believe that many patients get well, not on account of the doctor, but in spite of him.

May I take advantage of your good nature for a moment in a personal experience which, most likely many of you have similarly been through, for it will serve to illustrate my attitude in presenting this paper to you tonight? An apparent epidemic of pneumonia had broken out in a country town I was in, and about 26 cases, occurring consecutively and mostly children, had fallen to my lot. After the first three cases, with the eager enthusiasm of a fresh graduate, I adopted a uniform system of treatment. I recall how proudly I sat at home one night after the favorable outcome of the last case, and with complacent self-approval thought that my treatment must be good. And then, too, how well do I recall a week or so later when I lost my next three cases in a row and with my egotism shattered and my vanity squelched, I sat there a "sadder but a wiser man."

Now permit me to say a few words upon a surgical subject

which, though not as spectacular as the work in the hospital operating room, though not as important apparently as the big surgical problems, nevertheless I feel is one that reaches you all, more directly and often, than the major surgery which usually goes to the specialist and the hospital. Most of you here have had or will have frequent opportunity to treat accidental wounds of the non hospital type, by that I mean most accidental wounds which are not usually rushed to a hospital, such as a crushed thigh requiring amputation, etc. Our industrial field and the ordinary accidents of civil life give large amounts of such work to the general practitioner and not the specialist, so that I trust this may be of some interest to you all.

If you will bear with me for a moment I will mention certain several methods or observations in reference to primary treatment of accidental wounds.

For the sake of clearness I will endeavor to present a concrete example.

A workman, factory workman, catches a dirty hand in a machine, sustains a ragged, deep, crushed laceration in the palm two inches long and a compound fracture of the middle of first metacarpal bone in good position, the second wound being at outer border of palm about one inch long, and over site of fracture, wounds gaping somewhat, and little or no bleeding. Palm gauze dressing and patient brought to the office shortly after injured. What often happens?

Dr. A. Places the hand in basin of warm water and soap, allows to soak then washes it, dries up

with cotton, then places a bichloride of mercury wet dressing, puts on a splint. "Have it heal up by granulation" he says, "come tomorrow for another wet dressing".

Dr. B. Washes wound itself with soap and water, dries, applies alcohol wet dressing, splint, renew and keep wet.

Dr. C. D. & E. Do likewise only using boric acid, carbonic acid or lysol, and a patent preparation, chinisol, respectively.

Dr. F. (A surgeon by the way) washes the wound and places iodiform gauze packing in both with a dry dressing over and splint.

Dr. G. Believes in painting wound and skin with Tr. Iodine and not washing it, suturing, closed with gauze drain, and H., washing wound, Tr. Iodine suturing and no drain, and still another dusts Aristol powder in wounds after washing with alcohol, etc., etc.

As you see, we get a variety of combinations and often with no definite aim in view.

Now I am not putting forth any new claims nor in superior wisdom advocating a particular form of treatment, but I merely submit to you a definite series of cases with a certain fundamental common technique, and with the hope that it may at least assist some in forming a more definite plan; and leave to your judgment whatever conclusions can be drawn from the series.

I will state that for practical purposes any accidental wound should be regarded as infected and primary treatment requires fundamentally:

First: Stop shock and bleeding. This needs no comment, except,

do not use styptics in wounds.

Second: Secure coaptation, drainage, occlusion and rest.

I need not mention principles relating to such with which you all are familiar, but will mention only points incidental and pertaining to the technique itself.

Third: Prevent development of infection. This naturally is of great importance, and upon accomplishment of which the greatest variations in method exists.

Now in the series mentioned this procedure was followed out.

First: Area surrounding wound is cleaned and shaved if necessary for a distance reaching at least beyond the area covered by the first layer of gauze dressing, which will subsequently be placed over the wound. In cleaning do not immerse the entire part but scrub only the margin of the wound and area mentioned above, closing the wound itself with sterile cotton. I've a dirty, grimy hand soaked in a basin of soap and water which became a beautiful black muddy solution within a short time, and which was gently finding its way to the depths of a compound comminuted fracture. An ethereal solution of green soap containing alcoholic ether 29 per cent., alcohol 5 per cent. I have found excellent, washing this off with cotton plugs saturated with 65 per cent alcohol, and dried.

Second: The wound is swabbed out with the alcohol and here, a most important and absolute principle, remove all foreign particles and dirt, and it must be seen that all devitalized tissue, bone particles, fat and particularly muscle tissue, be removed, even cutting away portions of tissue of doubtful vitality, where it is mechanical

ly practical and justified anatomically, then dry the wound thoroughly. All procedures should be done in a thorough aseptic manner. This may seem needless to state, but it seems oftentimes hard to be fussy with sterility when we are confronted with an original dirty wound, but it pays I'm sure. The wound is then filled with a 5 per cent. solution of Dichloramine T. in Chlorcosane and efforts made to reach every part of the wound by swabbing, spraying or syringe. Coapt, when indicated, by suture but never tightly; drain for twenty-four hours by means of a small strip of parafined gauze preferably, or else rubber tissue all wounds more than skin deep that can be closed mechanically; no drain in open wounds.

Where in doubt as to the vitality of deep structures that cannot be reached, such as necrosed bone in a comminuted fracture awaiting X-ray findings, or any surgical reason dictates leaving wound open; such as an unlocated piece of steel, gauze saturated with Dichloramine T may be placed in wound but not packed tightly. I would emphasize that established surgical principles should always prevail even though this preparation be used. Dichloramine T is then swabbed over wound and surrounding skin. Wound is covered by layer of Paraffined Lace Mesh gauze and light layer of sterile dry gauze above. Dress daily for first few days by simply applying Dichloramine T and sterile gauze.

Now as to statistics; well do I realize, gentlemen, what a dream such can often be, so I tried to be wide awake when I compiled these

and state that in a series of 311 cases treated by this method there was not a single case of infection. The cases treated and cited for purposes of deduction were:

First: All treated within first twenty-four hours.

Second: All received no treatment other than that described.

Third: All treated by me personally.

Fourth: All wounds were traumatic, such as contused lacerated and crushed wounds ranging from deep skin lacerations to comminuted compound fractures,—lacerated, severed tendons, crushed bone injuries and intraarticular wounds.

Fifth: All received same treatment varied only by variation in surgical mechanics, tendons sutured, fractures reduced etc. all at primary treatment.

I submit these observations for your own conclusions. There is no claim to entire originality, I merely endeavoring to fix the comparative value of a definite procedure described more or less by other men.

As you all may recall, the Dakin-Carrell method of treating wounds has shown wonderful results, but the technique required in their method is so complicated, when properly carried out, that it is applicable practically to hospital practice only, so Chloramine and then Dichloramine T were subsequently added by Dakin to the Chlorine group of antiseptics while in search of a simpler method of making available the antiseptic properties of the hypochlorites.

These two latter preparations are less irritating to the skin and

the last, Dichloramine T, is a more stable preparation which liberates its antiseptic element slowly and powerfully. I feel it essential to mention a few peculiarities of Dichloramine T inasmuch as they are important in its application.

First: Dissolves in oil which must be chlorinated. Solvent now used is a chlorinated paraffin wax introduced by Dr. Dakin under name of Chlorcosane.

Second: No water must come in contact with solutions of same. It decomposes with evolution of Hydrochloric acid.

Third: Apply with ordinary cotton swab or all glass atomizer or in deep wounds with all glass syringe or else simply pour into wound.

Fourth: Keep in dark, glass stopped, bottle.

Fifth: Occasionally causes irritation of skin if solution is decomposed from contamination, or exposure to heat (145° F.) or cold of marked degree, and metals also decompose the solution.

Sixth: Incompatible with other antiseptics.

Seventh: Effects are very rapid, 5 per cent. solution usual for wounds, though 8 per cent. may be used.

I may add that I used this preparation in a very large number of cases which could not be classified as being treated under practically identical conditions as this series, but which large number nevertheless gave striking evidence of the powerful action of Dichloramine T, and without any harm to the tissues or the individual.

I believe it interesting to note that I ran a second series of

326 cases all under similar conditions and similar type wounds except that they averaged of less severity, and were somewhat more frequently drained. Here I used Tr. Iodine in same manner as Dichloramine T. There were 15 cases, or 4.7 per cent. of infections which were promptly controlled. More pain was experienced in its application, time of healing was longer, and escharotic effects at times observed. However, I still consider this as an excellent substitute method for that of Dichloramine T when latter is not available.

May I make a few remarks and surgical "dons" applicable and which shall I hope serve at least to crystallize some facts.

First: Don't as a rule probe wounds.

Second: Don't neglect to shave hair around a wound.

Third: Don't use strips of dry gauze in corner of a closed wound, particularly a small wound for drainage; it usually makes an excellent cork.

Fourth: Don't suture wounds tightly.

Fifth: Don't use collodion as a primary dressing.

Sixth: Don't be in a hurry to amputate badly crushed fingers and toes; with patience they often do surprisingly well.

Seventh: Don't put on tight dressings or splints over wounds, particularly within first twenty-four hours; subsequent swelling and edema cause much damage.

Eighth: Sterile adhesive strips may be used at times to coapt skin in parts not so movable.

Ninth: Paraffined gauze strips make excellent drains.

Tenth: Don't use catgut in skin if possible.

Eleventh: When in doubt as to the vitality of deep tissues don't close up wound entirely.

Twelfth: Don't overlook severed tendons.

I once heard Da Costa say, "Many times when operating, the highest wisdom is to stop" and the same rule ought to apply to a surgical address, so I will hasten to apply this rule with the hope that my remarks, received with courtesy and patience, may carry with them the humble spirit in which they are uttered for, to quote again, may I say:

"I have praised and blamed, yet what am I that I should judge?"

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The Symptomatology, Course and Treatment of Pernicious Anemia.

By John T. Watkins, M. D.

SO subtle are the symptoms of onset in this disease that they not infrequently pass unrecognized as warning signals for varying periods, often many months. This emphasizes the importance of the old observation that there is no constant relation between the symptoms complained of and the stage of the disease as disclosed by the blood picture, etc. Instances have come under the observation of most of us in which the individual has continued to follow his occupation; if not of the over-strenuous sort, until his total count had fallen as low as two millions per c.m.m.

None of the subjective symptoms, either singly or combined, are sufficient to identify the disease but when taken together with the objective evidences and the results of thoroughly conducted laboratory investigations, they suffice for its recognition.

While there are no definite symptomatological groups into which the various cases fall, yet three such divisions may, it seems, be arbitrarily and advantageously made, such groups being recognized by the predominance of certain manifestations.

No better description of the symptomatology of one group has been given than that originally written by Addison. In this the outstanding features are more or less pronounced physical weakness, languor, breathlessness on exertion, palpitation, throbbing of the peripheral vessels, pallor or icter-

oid tint of the skin, failing appetite with inconspicuous digestive disturbances, perhaps occasional slight edema and loss in weight, not often commensurate with the appearance and symptoms complained of. Other symptoms may not be complained of, but the progressive nature of those manifested, interrupted possibly by remissions, lead ultimately to a state of more or less complete exhaustion out of which the victim is unable to raise himself.

In another group gastro-intestinal disturbances predominate and it often happens that for considerable periods of time, owing to inadequate investigation, the manifestations are treated as evidence of disease of other cause. How often, for example, has the abdomen been opened in the search for carcinoma of the stomach because of the loss in weight, evident anemia, loss of appetite, nausea or vomiting, gastralgic attacks, a misleading radiogram and the presence of an achlorhydria? At intervals, or perhaps more or less persistently, such a group of symptoms, with or without diarrhoea, meteorism, etc., may dominate the picture. Instances of gastro-intestinal disturbances of the type mentioned which have persisted for years and finally ended in a pernicious anemia, are reported in the literature of recognized authorities. When intermittent upsets occur they do so quite independently of food or other known cause, and recovery occurs quite as often

seemingly independent of treatment. It happens occasionally that, as the symptoms abate, a remission seems to have been initiated. The gastric findings, are more or less constant and consist in the main, in an achlorhydria—at times an achylia gastrica—low total acidity and rapid evacuation of the stomach contents if food has been retained. It is an interesting fact that the supplying of hydrochloric acid does not prevent the recurrence of these attacks or materially influence the diarrhoea if present. Diarrhoea is often most troublesome; the stools are alkaline, mushy, and highly offensive, representing an advanced degree of putrefaction.

A third and very large group is made up of those cases displaying early and late evidences of peripheral nerve and spinal cord involvement. The anemia may appear first and be quite advanced before the nervous involvement becomes manifest but very frequently, as shown by the study of over 300 cases by competent observers, nervous disturbances, displaying a variable tendency to progress, occur in the preanemic period. Woltmann reports an incidence of nervous involvement in 80.6 per cent. of 150 cases, and Riley finds about 80 per cent. in 186 cases studied. The most plausible explanation for this high incidence is undoubtedly found in the improved methods of examination of the nervous system. The ultimate lesion is a combined subacute sclerosis involving both posterior and lateral columns. There is little symptomatic evidence of coincident brain lesions of the Lichtheim type occurring

in the course of the disease, but some of the late mental manifestations have been ascribed to the effect of these lesions. Subjective symptoms complained of are most often paresthesias, hyperesthesia and pain, the two former predominating and usually manifest in the hands and feet while pain, when present, is most often felt in the legs. The paresthesias vary from sensations of numbness, tingling, coldness, stinging and burning to almost any imaginable type of perverted sensation. The hyperesthesia may be most distressing, especially when the feet are involved. As noted, such symptoms occasionally occur very early before objective manifestations are apparent, but in such instances other subjective evidence may be elicited. The blood count may possibly show little change, but frequently a color index of 1. + with a slightly depressed or normal total white cell count and a relatively high small mononuclear count will be found.

The diminution or loss of deep muscle sense, often with little or no disturbance of cutaneous sensibility, and the impairment or loss of the vibratory sense, are frequent early changes. The disturbance of muscle sense in the intrinsic muscles of the hands and feet, as shown objectively by the inability to write well, to sew, to button the clothing, etc., occurs before similar disturbance is met in the ileo-femoral, scapulo-humeral and thoraco-scapular groups. The former condition is known as acro-ataxia whereas the latter is termed proximo-ataxia. Acro-ataxia is most commonly seen in the lower extremities; here, for ex-

ample, the great toe may be flexed, twisted or bent without knowledge as to its position by the patient. Elevate the foot, however, and he will indicate its position accurately. In this stage of the disease acro-ataxia occurs in the absence of proximo-ataxia as shown by the ability to accurately perform the heel to knee, finger to finger and finger to nose tests. As the disease progresses proximo-ataxia and disturbed cutaneous sensibility are added to the picture, and sooner or later, with the possibility of disturbed sphincter control being superadded, the patient becomes helpless and bedridden. A careful review of the literature discloses the fact that peripheral nerve and spinal cord involvements are found almost invariably in individuals who are past fifty years of age. From the foregoing it will be observed that acro-ataxia occurs first, while in tabes the reverse obtains. Hoover, who has studied this phase very carefully, points out that the neurological phenomena progress apparently just as rapidly in those whose blood picture is little disturbed as in those with advanced anemia.

Mental symptoms are not usually manifest early in the disease, but careful analysis will disclose the fact that a considerable percentage complain of memory disturbance, irritability, depression, introspection, etc. In the terminal state mental aberrations are of more frequent occurrence.

The prognosis in true primary anemia, or that in which no cause has been demonstrated, stands as to permanent recovery as it did when the disease was first recog-

nized. Instances of permanent recovery have been reported and possibly isolated instances do occur, but in the main there is good and sufficient reason to question the correctness of the diagnoses. Remissions constitute the real essence of the disease and long remissions, even several years in duration, do occur, but even the six-year limit set by Cabot is not wholly reliable as relapses have followed after some very prolonged respites. The condition in which so many of these patients come under observation emphasizes again the very great importance of an annual physical inventory, particularly made, to those who would give to themselves the greatest measure of protection against the inroads of diseases of insidious onset. A simple physical examination is not enough in itself but must, to be of the greatest value to those concerned, be supplemented by accurate blood counts and urinalyses. Conclusions are drawn from the composite picture and the data filed for reference. The natural tendency of the disease to remission in its course makes it difficult to place an exact value upon any given therapeutic procedure; however, the treatment which seems to be followed by the greatest number of remissions in a series of cases justifies its use. The very fact that many different remedies and plans have been suggested and tried without uniformity of result speaks for their rather feeble utility as a whole or in part. Those measures which, singly or combined, have been followed by results of apparent value are the removal of focal infections, rest, diet, pharmacotherapy, transfusion and splenectomy.

The correct diagnosis having been made beyond reasonable peradventure, rest in bed is instituted as a fundamental procedure. All reasonable care should be exercised in the selection of the patient's room to provide, as far as practicable, inspiring surroundings, emphasis being put upon light and air. Quietude and freedom from exertion, the visitation of solicitous friends, as well as control of the emotions, are matters of prime importance in the active stage of the disease. The hygiene of the mouth must be scrupulously attended to for neglect of this may easily promote an inaptitude for food which, independent of this feature, is often most difficult to combat.

Emotional disturbance is particularly to be avoided for it is a known fact that remissions have been terminated and relapses instituted by grief. This fact leads one to the just suspicion that some endocrine disharmony has played a part, for it is known from Cannon's studies that emotions, pain, fear, etc., do profoundly influence the internal secretions, notably that of the adrenals.

Focal infections, especially oral, throat and paranasal sinus infections, are best dealt with at this time for the reason that less blood is lost and less energy expended than when the patient is ambulatory or semi so. It is needless to say that infected sinuses should be drained and their prompt healing encouraged. Teeth with periapical infection, or about which there is pyorrhea, should likewise be looked upon as a menace and their removal effected. Devitalized teeth, whether they

appear healthy or not, should be seriously considered for removal. It is a regrettable fact that even to-day many will proceed with the treatment of the severe anemias having given little heed to the question of oral sepsis. Moreover, it seems rather an incredible fact when Hunter's preachments have been proved beyond reasonable doubt and accepted with little modification. It is granted, for sake of argument, that any existing oral state may or perhaps may not be the direct-cause of the anemia in question, but the very fact that hemolytic bacteria have been repeatedly demonstrated in these cases, even mild oral sepsis justifies radical correction for obvious reasons. From an infected mouth, especially in the presence of pyorrhea alveolaris, infection of the tonsils and the whole gastro-intestinal tract may come. The act of mastication massages the gums expressing infected material into the mouth which is swallowed with food and saliva. It must not be forgotten that in this disease the normal bactericidal barrier, viz., free hydrochloric acid, is absent from the stomach and as a result, infectious material is carried on into the lower alimentary tract adding its share to an already defiled flora. Ascent from the duodenum into the bile passages also frequently occurs. Periapical dental infections give rise to hematogenous or lymphogenous dissemination.

Tonsillectomy is to be recommended in the presence of oral infections and definitely septic tonsils, but not for simple adhesions unless cultures made from the bottoms of the crypts prove the

presence of undesirable bacteria.

Infections of the bile tract are best proved by direct culture of bile as obtained by duodenal intubation. Their treatment, if proved to exist, will depend upon the individual case. At the present time the medical treatment offers the best hope through repeated drainage and the use of autogenous vaccines prepared from bacteria isolated from bile culture. Cholecystectomy, like splenectomy, was quite in vogue for a time, but it is giving way in the majority of instances to the less heroic medical regime. The rationale of this is seemingly apparent for the gall bladder, even if infected, constitutes but an integral part of the biliary storage and drainage system, the remainder of which may be as badly infected as the part removed. If, however, drainage cannot be satisfactorily effected medically, and there is sufficient evidence of unrelieved stasis in the gall bladder, its surgical removal should be considered.

The presence of focal activity in the appendix, fallopian tubes, urethra, bladder and renal pelvis, if proved to exist, should be dealt with at such a time and in such a fashion as judical discretion dictates.

Much diversity of opinion exists as to the dietetic management of this disease. Some advocating the crowding of food, even past the point of toleration, whereas others pay respect to the disturbed digestive chemistry by eliminating an excess of proteins, because of the excessive putrefaction of this group in the bowel, and maintaining the bulk of all foods at a relatively low level. In the exper-

perience of the writer the latter course is the only really workable one in what is termed true pernicious anemia. It seems best often to allow the individual more or less latitude in the selection of his foods, especially in the active period, as it is then that the appetite is usually poorest and the digestive function least efficiently performed. He should be encouraged to take small quantities of nutritive foods, such as milk and buttermilk, at frequent intervals, continuing thus until such time as improvement, if it comes, will justify his taking a more ample aliment. As the diet is amplified it is well to keep the protein intake below 100 gms. per diem, and due consideration must be given to the oral condition in the character of the food offered. Pursuing such a plan it is possible in favorable cases to reach within a reasonable time a caloric equivalent that is adequate for the individual. Not infrequently the intestinal condition will prove itself a marked deterrent to quantitative increase in food and unless it can be improved little, if any, progress will be made. In such instances a most salutary improvement will often follow the daily irrigation of the colon with three or four quarts of a normal saline solution. This procedure has the effect of mechanically cleansing and removing en masse large numbers of highly offending bacteria together with the waste which tends to accumulate here and serve as pabulum for succeeding generations. The rationale of this will be apparent when it is realized that the transit of materials taken by mouth is far more rapid than normal through

the stomach and small intestine, but becomes markedly retarded when the colon is reached, thus affording an opportunity for excessive decomposition.

Stomachics are often employed in the effort to promote an increased desire for food. Of such preparations the Tincture of Nux Vomica is to be preferred, and the best results follow the use of small doses, e. g., five minims repeated at three-hour intervals during the waking hours. By this method of administration a more sustained effect is gained than through the giving of larger doses just prior to the serving of food. It is conveniently and best dispensed in a vehicle such as the Elixir of Lactated Pepsin which contains a certain amount of free hydrochloric acid. Little if any peptic activity is to be expected from such a preparation however.

Owing to the very consistent absence of free hydrochloric acid from the stomach there is no activation of peptic ferment if the latter is produced at all in the absence of the acid, and the pylorus remains patent, permitting the rapid egress of stomach contents. Free hydrochloric acid, as Acid Hydrochloric dilute, may be supplied in doses of fifteen to thirty minims to offset, as far as practicable, the foregoing faults. Two doses may at times be given to advantage three times daily, viz., one dose at the beginning of the meal and the other at its close. This preparation should always be relatively fresh and be given in a capsule, as by so doing the whole dose reaches the stomach where its effects are desired. Pancreatin is recommended by some very

competent observers but no evidence is at hand either clinically or pharmacologically to prove its worth.

Of the drugs the only one of proved worth is Arsenic. It is most often given orally as the Liquor Potassium Arsenite. The administration is best begun by prescribing two or three minims to be given three times daily after food with orders to increase the dose one minim per dose per day until fifteen or twenty minims are taken three times daily. When the high point is reached it is well to recede by the same plan until the initial dose is reached, then discontinue for a short period and resume again as before. Sodium Arsenate may, at times, advantageously replace the Potassium salt. Arsphenamine offers no advantage over the older preparations, in fact undesirable reactions often follow its use and in any case, its effect is not of the sustained type desired. Sodium Cacodylate administered hypodermically offers a useful substitute for the other preparations, especially when the latter are not well tolerated. The action of Arsenic is probably that of rendering the red corpuscles more resistant to hemolytic influences.

Iron has but limited use in the treatment of this disease for the reason that large quantities of free iron, as hemosiderin, resulting from the destruction of blood, are available within the body itself. It may happen, however, when a remission is in progress that cellular regeneration may occur at a rate in excess of that at which available iron is supplied with the result that the color in-

dex drops below 1. In such an instance the administration of iron as the carbonate orally, or the citrate hypodermically, becomes necessary.

Cholesterin, quinin etc., have no virtues that commend their usage; on the contrary, the latter has been quite conclusively shown to be an hemolytic agent.

In transfusion we possess an agent of unquestioned virtue, if its application is properly made. It does not cure, however, as our most sanguine hopes led us to believe that it might when the time of perfected technic arrived. Transfusion with properly matched and Wassermann free bloods—and no others should ever be considered—does often initiate a remission and in some instances, the remissions seem to be longer than those brought about by other methods. The method serves its greatest purpose, beyond doubt, when applied at a time when the recipient's blood still gives some evidence of regenerative activity, as displayed by the presence of blasts or reticulated cells. It is my belief that transfusion has a place in the treatment of every case of pernicious anemia, and it is my conviction that the use of whole blood in mass transfusions is preferable to the more prevalent Citrate method. If the latter is to be employed, repeated small transfusions offer the method of choice.

Splenectomy. In 1913 Eppinger presented to the society of Internal Medicine in Vienna his views upon hypersplenism as based upon Weidenreich's teachings of the normal histology of the spleen. At this time he advocated splenectomy in pernicious anemia.

He based his recommendation upon his interpretation of the pathology in the spleen and the estimation of hemolytic values as disclosed by the output of urobilin in the stools. The studies of the stools showed a normal urobilin content of 0.12 to 0.15 gm. per diem, whereas in pernicious anemia the findings varied from 0.24 to 1.14 gm. per diem, which as will be noted, are from two and one-half to seven times the normal values. Following splenectomy, the values dropped to from 0.015 to 0.062 gm. per diem. This, of course, seemed an immediate justification for the operation and it proved, in fact, that one of the greatest factors in the destructive chain had been removed. Time alone could speak for the permanency of the results. Further studies were pursued in the case of other severe anemias of known cause, but simulating pernicious anemia, such as the severe secondary anemia of carcinoma of the stomach, with the result that the hemolytic values were found to be subnormal. Schneider, who closely observed the work of Eppinger, later perfected in this country a more exact method of arriving at hemolytic values by estimating the bile pigments of the duodenal contents. Following this method it is possible to demonstrate increased bilirubin and urobilin values and to disclose the presence of urobilinogen in practically every case of pernicious anemia. Normally, urobilinogen is not found except in occasional instances and in small amount. From the foregoing, the basic facts upon which the recommendation of splenectomy is founded, may be

clearly seen. The results, following the operation, have not justified its use except in exceptional instances where other things have failed utterly. It is true that re-

missions are initiated by the operation but the blood picture remains that of pernicious anemia and pleochromie persists in the duodenal contents.

More Medical Talk Needed.

TOO much talk is the bane of most of our citizens. It is thus refreshing to find that there is a whole profession whose members talk too little. Dr. Florence L. Meredith, writing in "Modern Medicine" (Chicago), asserts that physicians should do more talking—should lecture freely on medical subjects and lose no opportunity to inform the public on matters of health and sanitation. People have been "left in uncharted ways" in health matters, Dr. Meredith asserts, and to this she ascribes the success of charlatanism in medicine and of healing cults in religion. The only rational basis of action, we are reminded, is enlightenment; and the right source for such a program is through the ethical physician, willing to back with sound knowledge an effectual enthusiasm for health. Writes Dr. Meredith:

"Since the war began there has been a great change in the general attitude toward health and disease. Only the fit were able to be of use to their country and an honor to themselves. Girls who went into industrial life and business life found that their opportunities for advancement were sharply limited even the holding of their positions precarious, unless they were well. Out of about ten thousand examinations during the period of the war, made on

girls in industry and business, it was found by us that only about 5 per cent. were really in as good health as was possible for them. Not that all the rest were really ill—only about 10 per cent., in fact—but they were much less well than every human being has a right to be, or than is the duty of every human being to try to be. At that time the public began to feel that there is something not quite right about its general health, and began to manifest interest in the problem of how to improve it. It is time now to keep this tide of interest in health rolling on in the right direction until people are as proud of their health as in the past they have been, especially women of their ailments.

"The people naturally turn, that is, most of them still continue to do so, to the members of the medical profession for the health they are seeking. If it can be shown by doctors that there is any way whatsoever that this health which is becoming so popular can be achieved, it is certain that they will at least listen to what the doctors say; and a large number of them are in the mood not only to listen, but to try almost anything which comes to them with any authority back of it.

"Fortunately, it so happens that science has advanced to the extent

that there is a great deal for doctors to say on this subject. Some few of them are saying it, but the vast proportion are sticking to the old-established method of maintaining a 'professional' silence on health subjects, both in the office and in public. It would hardly seem either professional or ethical, when people are almost literally clamoring at one's door for some advice as to the ways of getting and keeping well, steadily to ignore their health education until they fail in their self-directed search and illness comes upon them. There are many theories about the maintenance of health which have become established facts—facts which the public should have at its disposal; and yet we daily find, even in the city of New York, that most enlightened of all cities, an appalling ignorance of these same facts.

"Since at present there are not enough doctors to wage a constructive health campaign in the life of each individual, and since all individuals do not place themselves in a position to get personal advice, we must resort to lectures given to groups—the last thing the average physician would choose to do; but to refuse any longer will be to deprive the public of what it ought to have."

The natural field for such lectures, Dr. Meredith goes on to say, is groups as they are found in factories, stores, clubs, unions, church organizations, and the like. The advantage of already-formed groups is that they are more likely to consist of individuals somewhat alike in their needs. Most physicians have some such group in their care and can give them collectively far more than it is pos-

sible to give them as individuals. The writer goes on to consider and answer some objections. We read:

"Three objections have been raised to the idea of more lectures on health. The first is that the public will learn to do without doctors in private practice if every organization and group supplies its members with health education. It is the same objection that was originally raised against any industrial medical work, and the argument has been entirely refuted. Health lectures will not have this effect any more than will any other kind of medical work, advised to visit their own doctors for any further advice they may need—and it should be emphasized that most of them do need it—the probability is that more patients than ever, only an increasing proportion of early cases, will be seen by general practitioners, family physicians and also by specialists.

"The second objection is just the reverse of the first, that both industrial and outside physicians will be swamped with patients who are not urgently in need of care, to the detriment of those who are. But, as I have indicated, the doctors will probably ultimately find themselves with nearly the same number of patients as usual because fewer of them would become ill, and some of the others would learn how to get along intelligently without needing medical advice so often.

"The third objection is that so much talk about health is going to make people into health cranks. This depends, of course, very largely on the attitude of the physicians to whom they listen. It is as possible for people to take a normal, sane interest in looking out

for their bodies and conducting their physical lives as it is for them to take a normal, sane view of business problems to which they must give considerable attention, without losing their balance about it. It should not make a normal person disturbed to be given an idea of that most remarkable machine of all, his own body. To be sure, many people do become morbidly absorbed in the contemplation of their own mysterious 'works', but is it usually from lack of a real understanding of them and not from too great an understanding. What they do not understand they are more likely to worry about. Modern methods of psychology have proved thus. A little knowledge is a dangerous thing if given in any number of possible wrong ways and wrong times to wrong people; but the right sort of physician can make neurotic people less so rather than more so by judicious information.

"To sum up, the function of group teaching, which is necessary in order to cover the field of health education more completely than can now be done by individual methods, is first to stimulate, then to educate. Those who do not believe that this can be done are not familiar with the signs of

the times. We have thought that the public could be interested in its public health by being forced into it by biards of health. We have thought that the public could not be interested in its personal health because there was no force to compel him. We have ignored the possibility of making his own desire for comfort and happiness and efficiency a greater force than any external compulsion. Pressure of circumstances has already partly done this. The rest of the task is one for physicians to undertake. One way physicians can do this is to utilize in every case he sees abroad scientific knowledge of the subject of health; and to demonstrate his belief in the possibility of much better health resulting from much better habits; and to feel, himself, a great enthusiasm for the full, complete living which is made possible only if the health is right. This is, of course, better done in private consultations; but because it can not be quite so well done with groups is no excuse for not doing what is possible in that way, provided the importance of the personal consultation is not minimized. The lecture certainly offers a too important way of teaching health to be any longer neglected."



BOOK REVIEWS.

General Pathology—An introduction to the Study of Medicine. Being a Discussion of the Development and Nature of Processes of Disease. By Horst Oertel, Strathcona Professor of Pathology and Director of the Pathological Museum and Laboratories of McGill University and of the Royal Victoria Hospital, Montreal, Canada. Cloth Pp. 357, with Illustrations. Price \$5.00 net. New York: Paul B. Hoeber.

It is not overpraise to state that this work of Oertel's is one of the outstanding books of the day. Written in a style that is commendable and in the scientific spirit without which every book on the subject of pathology falls short of being in the first rank, it gives the reader a thorough interpretation of all the problems in pathology, some of which no doubt have perplexed him on account of his limited knowledge, due to the fact that he has never been fortunate enough to acquire an illuminating book on the subject.

The subject of general pathology has too long been the *bête noire* among physicians in general even among those who lay claim to being well versed in all subjects of medicine. The reason for this is that most physicians—the majority—have for some unexplainable reason regarded the study of general pathology as too abstruse and too wearisome a subject to cope with, and have relegated, on account of this attitude, its interpretation to those men in the medical profession who are specialists in pathology.

While there are good reasons for this attitude, as regards a large number of books on general pathology, in the case of Oertel's work a front of this nature would be a detriment to the busy practitioner, for reasons which are too obvious to state here in their entirety. But there are three reasons which should be mentioned here, why Oertel's work commends itself to the thousands of physicians throughout the country, and they are as follows: Pathological processes are regarded as expressions of physico-chemical laws; the great educational value which accrues from a study of the historic development of ideas and hence an understanding of current ideas; the visualization of possible pathological occurrences based on the anatomical conceptions of the subject.

Any book on general pathology that has reasons such as the three mentioned above, has an asset which should bespeak a wide circle of readers; and when added to these are a simplicity of presentation and clarity of thought that are evidenced on every page, it cannot be gainsaid, in all fairness to the author, that at last the American medical profession has a book at hand that is of so unusual a nature that it must be considered a hall-mark in medicine.

HENNESSEY'S DRUG STORE,

87 YONGE ST., TORONTO.

Where quality reigns supreme,
The Hennessey store commands the
confidence of the Medical Profession.

Review of Happenings in the Medical World.

New X-ray Machine

An x-ray machine was recently installed at the Guelph Hospital, and is the very last word in X-ray appliances. It is a gift to the hospital from the Red Cross, its cost, erected being in the neighborhood of \$5,000. Medical men and others acquainted with such instruments are united in admiration of the appliance which is now in use at the General.

London Medical Exhibition

October 3rd,—7th, 1921 at the Central Hall, Westminster, London, will represent the latest advances in medical and surgical science.

The organizers shall be pleased to receive any physician, surgeon, or dentist from Canada on presentation of his professional card.

Will Consult Druggists and Doctors re "Scripts."

Calgary,—“It will be the duty of the new Government to frame a policy with respect to the administration of the liquor law, and it will be my intention to enforce that policy to the utmost of my ability,” said Hon. J. E. Brownlee, Alberta's new Attorney-General.

Mr. Brownlee stated that he favored a consultation with the druggists and the doctors of the Province to obtain their views with respect to the liquor prescription business.

The Control of Hemorrhage

In cases of hemorrhage not amenable to surgical procedure the chief aim is to promote blood-coagulability. Hemostatic Serum, it is believed, affords the most effective means for the attainment of the desired object. In fact it has been said upon good authority that Hemostatic Serum is the only product which provides all of the factors essential to furthering coagulability of the blood.

Severe hemorrhages due to defective blood-coagulation may result from an actual deficiency in prothrombin, or from an excess of antithrombin. Hemostatic Serum is indicated in either event. It will supply any deficiency in prothrombin or thrombokinase, besides counteracting excessive antithrombin.

Hemostatic Serum may be administered systemically by hypodermic or intravenous injection, in 2-cc doses, repeated every two to four hours as the urgency of the case may require. A small pledget of cotton saturated with a few drops of Hemostatic Serum may be applied to the bleeding point. If the patient is a hemophiliac, or is likely to have prolonged or profuse bleeding, the intravenous use of Hemostatic Serum as a prophylactic measure, before any surgical operation is attempted, seems to be indicated.

Must Allow Exemption on Toronto Doctor's Residence

The Court of Revision has decided that a dwelling occupied by a medical man is a private residence within the meaning of the statutes, and as such is entitled to rank for partial exemption from taxation under the provisions of the civic by-law. The ruling was given on the appeal of Mrs. Adele Soules, who claimed exemption of a house at 1103 Gerrard Street east, rented to her nephew, a doctor. The assessment Department contended the house was used for business purposes and therefore did not come under the category of places entitled to partial exemption.

Say Easy Cure For Hay Fever.

Chicago,—There is a simple cure for hay fever victims, according to the National Association of Naprapaths, who held in Chicago their twelfth annual convention. They also declare that if they were turned loose in the insane asylums of the country they would have 50 per cent. of the inmates free within a short time.

Hay fever, the naprapaths declare, is caused by a short ligament along the spinal column which produces a nervous irritation, rendering the victim susceptible to the pollen with which the air is filled in the late summer. By getting this ligament stretched the victim would be relieved immediately.

For the benefit of the laymen, it might be explained that naprapathy is the science of treatment by manipulation of the ligaments.

The human body, as explained by Dr. Charles Smith, President of the Chicago College of Naprapathy, is like a harp or a piano, with the ligaments as strings. If one of these ligaments gets stretched it has the same effect on the system as if one of the strings on a musical instrument was out of tune. From these ligaments radiate the nerves. It follows that if the ligament is too tight the nerve that emerges from it cannot function properly.

Dr. Marriott, Though Ill, Refused To Be Held Up.

Dr. John Marriott, of Union frustrated two motor bandits who held him up at the point of revolvers and attempted to rob his home of all valuables. The men, who drove up to the house in a high-powered car, fled as soon as the doctor had knocked the revolver from the hand of one of them with the cane which he had with him at the time. The incident occurred at 7 o'clock in the morning when the doctor was seated on his front lawn. As soon as the bandits alighted from the car they ordered Dr. Marriott to throw up his hands and give them all the money and liquor he had in the house. Instead of obeying this command, the plucky physician, who has been ill for some time, struck the first bandit over the wrist with his cane, and knocked the revolver out of his hand.

Both bandits were apparently taken by surprise by the onset of the physician and beat a hasty retreat in their car, leaving the gun behind them.

New Treatment, By X-Ray, of Cancer

London, —A new X-ray treatment for cancer, which will cure 80 per cent of cases, is announced at a West London Hospital.

The new treatment uses much greater intensity of rays without injuring the patient. The apparatus now used gives about 200,000 volts the rays being of wave length and invisible to the human eye.

It is a highly complex electrical appliance, the invention of Dr. Wintz, a Bavarian radiologist.

Heads Surgical Staff in Children's Hospital.

Dr. W. E. Gallie, 143 College street, has been appointed head of the surgical staff of the Hospital for Sick Children, Toronto, to succeed Dr. Clarence L. Starr, whose resignation follows his appointment as professor of surgery at the University of Toronto.

Dr. Gallie graduated from the University of Toronto in 1903, was house surgeon for the Hospital for Sick Children for two years, house surgeon at the General Hospital for a like period house surgeon for the Hospital for Ruptured and Crippled in New York City in 1905 and 1906, appointed as associate in orthopedic surgery at the Hospital for Sick Children in 1906, and junior surgeon, Toronto General Hospital, from 1908 to 1911. In 1915 to 1917 he was in charge of surgery at the Davisville military hospital. He served overseas from 1917 to 1919 in the Granville Canadian Hospital.

Life Saving Pistol to Shoot at Cancer.

London, —The so-called new cure for cancer was much discussed in a public lecture at the final sessions of the British Medical Association at Newcastle-on-the-Tyne. The president, for example, told of a patient who was about to fly over to Germany to see a German doctor who had developed this new method.

The real nature of the advance is curious—it is rather an invention than a discovery. For some time specialists have hoped that they could cure cancer if they could direct, or, as it were, shoot, certain rays into the particular part of the body and persuade the affected tissues to absorb them also as a piece of sugar absorbs water.

The chief difficulty was to find, so to speak, a barrel or tube capable of shooting these penetrative rays. The rays were so powerful that they bombarded the tube to pieces and hindered its shooting powers. This trouble has been largely overcome. A tube—one may call it a gun or cannon—has been made which can shoot these immensely powerful rays into the body without itself collapsing under what is now technically called the "bombardment."

Surgeons and doctors, in short, have now in their hands a beneficent life-saving pistol of the sort that science has been seeking.

One great difficulty has been overcome, but I may give it as the general medical view that it is too early to say whether the affected tissues will sufficiently absorb the beneficent stream of "bullets," or active rays, to secure a complete

cure. The position is that for the first time science is enabled fully to apply a treatment from which much has been hoped.

Cancer is still very mysterious. A reader of one of the papers in the Section of Radiology, where the new treatment was touched on told that a patient of his, a woman, had kept herself alive for seven years simply by saying she would not die of her cancer. She lived as she put it, for seven years on her optimism. Cancer is mysterious, and the new treatment not yet proved, but, as he concluded, "in a year's time we hope to know a good deal."

Nerve Disorders Result of War Experiences and Peace Worries

London,—Two words, familiar to doctors, but hitherto unfamiliar to most people, are coming into general use, remarks The London Daily Express. Agoraphobia is one and claustrophobia the other; their increasing vogue being due to the war.

The trials of war time and the worries of peace time have played havoc with the nerves of thousands of persons who never know they possessed any until 1914. Men who went through the war now talk about their nerves as their great grandfathers used to about their gout, and women who have struggled for the last few years to make a Treasury note go as far as a sovereign used to, knowing all the while it is worth less than half now talk about their nerves instead of about their servants. They have given up ser-

vants and suffer from nerves instead.

Both agoraphobia and claustrophobia are forms of nerves—not so common as the snappy-temper form of nerves, but more common than they used to be. Agoraphobia is the fear of open places and claustrophobia the fear of confined places.

The sufferer from agoraphobia may feel all right as long as he is riding in a motor-omnibus along the Strand or Picadilly, but when he faces the problem of crossing Hyde Park or Trafalgar square he suddenly becomes afraid and seizes the arm of a friend or makes a detour rather than venture alone in the open. He looks around in terror for the nearest dugout and dives down a tube if he sees one handy or takes refuge in a teashop or a taxicab.

A variation of this fear of open spaces is the fear of high places. There may be no danger, but the sense of height suddenly overwhelms the sufferer, and his nerves collapse. If he is on the top of the monument he clutches the railings or shrinks against the pillar although he could not fall from the monument if he tried.

Sufferers from claustrophobia, on the other hand, may become stricken with fear at the thought of entering a lift, or of travelling through a tunnel, or of sitting in a room with the door shut. Every one going down a coal mine for the first time experiences something of this feeling of oppression, due to a sense of confinement. It seems as though the millions of tons of earth above are crushing one down.

Typhoid Fever Shows Increase

Marked decrease in the number of cases of diphtheria and scarlet fever is shown in the July report of the Ontario Board of Health. Smallpox shows a decline and measles a big decline while whooping-cough, typhoid and tuberculosis show an increase. An increase shown in the number of cases of venereal disease is credited by the department to the more efficient compilation of returns.

The comparative table is as follows:

| Diseases | —1921—1920— | | | |
|--|-------------|------|--------|------|
| | Cases | d'hs | Cases | d'hs |
| Smallpox | 104 | 1 | 142 | 0 |
| Scarlet Fever | 110 | 3 | 169 | 4 |
| Diphtheria | 285 | 19 | 302 | 46 |
| Measles | 223 | 3 | 1419 | 15 |
| Whoop'g cough | 227 | 7 | 106 | 5 |
| Typhoid fever | 44 | 18 | 35 | 8 |
| Tuberculosis | 165 | 121 | 161 | 82 |
| Infant. paralysis | 3 | 0 | 2 | 0 |
| Cerebro-spinal meningitis | 4 | 4 | 3 | 3 |
| Influenza | 2 | 2 | 9 | 9 |
| Pneumonia | 0 | 114 | 0 | 116 |
| | 1158 | 292 | 2348 | 288 |
| Venereal Diseases | | | | |
| | 1921 | | 1920 | |
| | Cases | | Cases. | |
| Syphilis | 159 | | 131 | |
| Gonorrhoea | 204 | | 135 | |
| Chancroid | 4 | | 0 | |
| | 367 | | 266 | |

A tabulation of small pox cases throughout the Province shows Ottawa with 33 cases, to be in the lead.

“Cancer Week”

The American Society for the Control of Cancer, 25 West 45th St New York, announces a seven days' campaign to be designated “Cancer Week” from October 30,

November 5. The purpose of the movement is to reach as many persons as possible in the United States and Canada, with the vital message of Cancer Control. Committees have been established in parts of these countries; lecture bureaus, made up of interested and authoritative speakers, have been formed, and the campaign will be conducted in accordance with the enclosed plan.

There is probably no preventive medicine campaign of more vital importance to all classes of people nor one which gives promise of greater interest or more hope. It is significant that the death rate from this disease has been arrested. Since 1916 it has remained practically stationary, with only minor fluctuations. This is the most encouraging thing which has happened since the Society was organized in 1913, and leads the society to believe that united effort by all cooperating agencies will not only prevent a further increase in this rate, but will effect a continuous decrease.

Has Started Educational Campaign About Dread Disease

It is not generally known that the League of Red Cross Societies has added cancer to the diseases against which it is instituting a fight, and its first move, as in all peace-time work which it has undertaken, is the education of the public generally to the importance of early treatment. Between 1908 and 1912 cancer caused more than 1,500,000 deaths, 500,000 of which were unnecessary had the disease been caught and operated on in its initial stages.

In an article in the last issue of *The Red Cross Bulletin* gives a list of facts about cancer, and concludes:

"It is a safe rule to seek advice about any and every lump which grows no matter where. Do not wait for the pain, do not wait for the ulcerating sore and the secondary growths all over the body. This must be our message to the people of every land. The doctors may save them from tuberculosis or they may fail even in the early case. But from cancer of the breast, or of the uterus, and from other cancers too, the surgeon can always save his patient if he is given the chance in time."

Difference Between Serum and Vaccine

The difference between a vaccine and a serum—terms that are frequently confused—is simply explained in *Holland's Pharmacy Handbook*, quoted as an authority by the *Medical Record* as follows:

"A serum is a product obtained by injecting into an animal, usually the horse, a culture (e.g. diphtheria or the toxin from a culture (e.g. streptococcus of the organism. Serums may be subdivided into—(a) anti-toxic serums, such as diphtheria and tetanus, which are obtained by injecting filtered cultures into the animal used to provide the serum; (b) anti-bacterial serums, such as anti-streptococcus and anti gonococcus, in the preparation of which unfilter-

ed cultures are used. Serums are usually injected in the flank or between the shoulder blades the skin being previously cleansed and the syringe carefully sterilized. Cases are on record where they have been given intravenously with normal saline solution and also per rectum.

The object is to stimulate the insuspension of killed cultures of a micro-organism which is injected directly into the human subject. The object is to stimulate the individual to elaborate his own antibodies, which results in increased resistance to the ravages of bacterial infection. Vaccines are of two kinds: (a) autogenous—prepared from the organism isolated from pathological material taken from the patient: (b) stock prepared from virulent cultures of the organism, isolated from other cases of similar bacterial origin. Vaccines are administered by subcutaneous injection by means of an all-glass hypodermic syringe. The site of injection may be the flank, thigh, shoulder or back. The skin is first sterilized by a pledget of cotton wool saturated with an antiseptic, e.g. lysol.

"Briefly, the difference is that with a serum the opposing influence to the toxins is produced outside the human body, while with the vaccine it is produced inside, and the degree of immunity conferred is greater with the latter than the former. It should also be noted that the dose of a serum is much higher, from the standpoint of the amount of fluid injected, than in the case of a vaccine. With the former the dose usually ranges from 10 c.c. to 50 c.c., while with the latter it is, as a rule, not more than 1 c.c."

New Hospital for Preston

Tenders are being asked for the wrecking of the Del Monte Hotel building, at Preston, Ont. The site of the present building is to be completely cleared with a view to the erection of an entirely new sanatorium on top of the hill. Comprehensive plans are in charge of a local architect which will mean when carried out in full that Preston will have a sanatorium eclipsing any other in this country and rivalling Clifton Springs and other famous health resorts in the United States. It is probable that the new building will front on the new provincial highway which will pass down around from the Kitchener road to a new entrance on Fountain St. near Shantz's foundry. But the side next the town will not be neglected and will be so beautified that only the most pleasing prospect will meet the eye of the visitor approaching from Main St. One of the features here contemplated is an inclined railway for ascending the steep hill on the brow of which the new building will command a magnificent view of the whole town and surrounding country.

Must Join in Fight Against Bovine Tuberculosis, Veterinaries Told

That the problem of eradicating bovine tuberculosis should create more general sympathy among the medical profession owing to the fatal relation between this disease and tuberculosis in children was

emphasized by Dr. F. Torrance, Veterinary Director-General, before the 42nd annual meeting of the Ontario Veterinary Association.

Dr. Torrance's address was given to well over 100 veterinary surgeons who are attending the meeting from all parts of the Province. He outlined the fight in progress against bovine tuberculosis which has been made by his department. He particularly drew attention to the number of municipalities which are availing themselves of Government inspection of cows which are the source of such municipalities' milk supply.

Nine municipalities are now under this system, including such large places as Ottawa, Regina, and Saskatoon. In these places much has been done in the eradication of bovine tuberculosis.

"The attention of the public has not been sufficiently directed to the cause of tuberculosis in children. The tubercular cow is still too prevalent with its fatal effects," he said. "Of England's ten thousand children under the age of five years who die each year from tuberculosis 34 per cent. are affected with the bovine type, which can mainly be traced to an infected cow. It would be reasonable to suppose that the same percentage of deaths from this type would apply to the large number of children under five years who die annually in Ontario from tuberculosis. Though the problem of eradication is largely one for veterinaries the fatal relation the disease has to human life—especially the lives of milk-drinking children—merits the support of the medical profession and the public in the fight.

Toronto Man is Admitted to College of Physicians

London,—At the July examinations of the Royal College of Physicians, London, Dr. Donald Kilgour of Toronto, Canada, was admitted as a member of the college.

City Child Healthier Than Country Cousin.

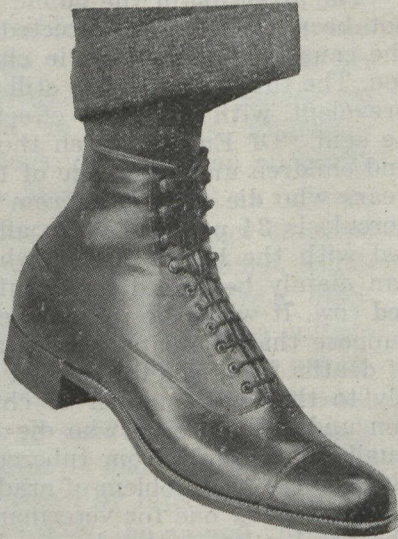
Montreal—The theory that the city-bred child is at a physical disadvantage as compared with the country-reared child, on account of the fresh air, purer milk and food enjoyed by the people on the land, received a further rude jolt from a detailed report which has come in from the child health special train, which is now touring the Province of Quebec, under the auspices of the Child Welfare Association.

Grafting Skin to Save Girl.

New York—Having already submitted to 250 skin-grafting operations, but facing 750 more, Cecilia Starkey, 16 years old, of Jersey City smilingly faces the ordeal in St. Francis' Hospital and utters little prayers of thanks to the Jersey City firemen who have sacrificed their skin that she may live.

According to the hospital surgeons, each individual bit of grafting has been successful and they do not hesitate to say they believe the young patient, in the course of time, will be almost as good as ever.

"We expect it will take about 750 more grafting operations before the burned surface is renewed with healthy flesh," said a hospital surgeon.



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