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EDITORIAL

DISHONEST ADVERTISEMENTS.

On the 21st January, Dr. Harvey Wylie, of pure food law fame, addressed the Ad Club of Toronto. His theme was the dishonest advertisement. He spoke with marked freedom against making fraudulent claims for goods, in the literature and advertisements used in placing these goods on the market.

Dr. Wylie said that there had been marked improvement in the ethical tone of advertising in general, but that there was room still for further improvement. Some of his opinions had fallen on barren soil, while some had taken root and grown. There was a very close relationship between a good article and an honest advertisement of it. Both should be of equal value and verity.

He proceeded to show how the vested interests were organized against pure food laws. The man who dealt in adulterated goods, leagued with the man who put the lying label on the bottle, with the medicine fakirs, and the quack drug interests. The United States had many millionaires whose wealth was built on grave-stones and wrecked lives. No such thing as a brain food, a nerve food, existed except in the advertisements, he said. You cannot legislate a country into bankruptcy or opulence, but you can banish the dishonest advertiser and trader.

This is good gospel and we hope those who advertise in such glowing terms cures for deafness, catarrh, cancer, consumption, fatness, leanness, diabetes, Bright's disease, etc., will take Dr. Wylie's words to heart and reform their ways. What he said to the Ad Club is equally applicable to the newspapers. There is not a newspaper that does not know that it is printing for money a lie when it inserts an advertisement of a cure for consumption, paralysis, diabetes, Bright's disease, cancer, and many other diseases.

That "there is something rotten in the state of Denmark" there

can be no doubt when admen, manufacturers and newspaper men combine with vigor to oppose legislation that would compel the makers of a proprietary medicine to publish their composition. But all this has happened in this country within the past few years. The Ad Club brought Dr. Wylie to this country to speak to its members, and let these now be guided by what he said—truth.

KILLED AND INJURED BY CANADIAN RAILWAYS.

Statistics regarding the toll of death on Canadian railroads are an interesting feature of the Railway Commission's annual report tabled in the House on 22nd January.

It is to be noted that the total number of killed and injured reported by the various railway companies under the jurisdiction of the board for the year ending March 31, 1913, was 2,547, that is to say, 643 persons were killed and 2,231 were injured. Of the total of 643 persons killed, 250, or approximately 39 per cent. of the total, were trespassers on railway tracks. Twenty-one passengers were killed, or 3.26 per cent. of the total. Of this total of 21 passengers killed it appears that 15 met their deaths by what would appear to be preventable causes on the part of passengers themselves, such as falling off trains while in motion, endeavoring to board trains in motion and endeavoring to get off trains in motion, so that the actual number of passengers killed by what might be termed non-preventable causes on the part of the railway companies was only 6, or less than 1 per cent. of the total number of 643 persons killed. The railway employees killed number 303, or 47 per cent. of the total. Of the total injured 410, or 17.9 per cent., were passengers, and of this number, 75, or 18.3, were injured from preventable causes on the part of the passengers injured, such as attempting to get off and on trains in motion. Of the total of persons injured 1,603, or 71.8 per cent. were employees of the railway companies. It will be noted that of what may be termed the preventable loss 250 killed fall under the heading of trespassers, which is a very large percentage of the total killed, and in this connection the board has taken up with the Attorney-General's of the various Provinces the question of prosecuting trespassers on railway property with a view to limiting the large number of fatalities which occur in this way.

TEMPERANCE AND INTEMPERANCE.

How very few who glibly use these words really stop to think what they mean. To many the words refer to moderation or the reverse in

the matter of the consumption of alcoholic stimulants. They have a far wider meaning than this.

An eminent physician once was seated at a banquet table along with a gentleman who was to give an oration to "temperance," of course, meaning abstinence from the use of alcoholic beverages. The physician we have referred to remarked to one near by him that the orator of the occasion in his judgment was so immoderate an eater that he would not live long. The truth is he died a few years later of arterial degeneration.

Man is his own worst enemy. In Britain the drink bill is \$900,000,000 a year, and the tobacco bill is \$125,000,000. These enormous quantities of these articles must be the cause of a vast amount of ill health. But add to this the vast amount of tea and coffee, much of which is badly made, that is consumed, and one gets a still better idea of the damage that is being done.

This, however, does not tell the whole story. One only needs to consider the amount and kind of food that constitutes the daily supply of so many people. We hear a great deal about those who are in want; but we do not hear much said about those who have too much, or rather, who take too much. All the excess over what nature requires is poison. Too much of anything is bad, *ne quid nimis*. If a man requires for his age, weight and work half a pound of meat, and he consumes daily one pound. What is the result?

Hardened arteries, damaged kidneys, overworked liver, and a sadly shortened span of life. At 45 he dies of apoplexy! A hardened and diseased artery can no longer stand the blood pressure and it ruptures. "Found dead by the wayside," and the report is given he died of heart failure. Perhaps he did; but why did his heart fail while he is so young? Enquire into his habits of life in the important matters of eating and drinking. He smoked a dozen cigars a day and kept up high blood pressure, he ate too much protein food and caused them to harden, he stimulated his appetite to further wrong-doing by stimulants at his meals, and he died of "a broken heart!"

If one wishes to form an idea of the vast importance of this subject, let him look into the returns of the deaths in the United States, Britain, Canada, or any other country. There he will find the record of the hundreds of thousands who fall by the wayside of life, long before the allotted span, from such diseases as apoplexy, Bright's disease, hardening of the liver, heart failure, etc. Over the vast majority of these could be written the epitaph: "He died of intemperance."

BENZOL IN LEUKAEMIA.

Korányi made some very important observations on the effects of benzol poisoning in three cases of leukaemia at Johns Hopkins Hospital. Selling studied the effects of benzol in animals. In these cases of poisoning there was a good clinical picture of purpura hæmorrhagica, and a remarkable reduction in the white corpuscles. There was a condition of leucopenia. One case there was a reduction of whites from 1,280 per Cmm. to 480, and in the other from 640 to 140. With this leucopenia there was an anæmia of 640,000 and 1,500,000, and 8 and 15 of hæmoglobin respectively. There was little change in the reds and no myelocytes.

The experiments of Selling showed that benzol is a powerful leucotoxin, destroying the white cells, and attacking the parenchyma cells of the blood-forming organs. It was found that after repeated injections of benzol there was an aplastic and atrophic condition of the bone marrow, and spleen, the lymph glands and lymph follicles. Regeneration in these took place when the benzol was discontinued. It was also observed that myeloid tissue suffered more than did the lymphoid, and, therefore, there was greater destruction of the polynuclear cells than of the lymphocytes. There is little injury to the circulating red corpuscles, though the erythroblastic tissue of the bone marrow is disturbed. At first there is a leucocytosis followed by a leucopenia. The aplastic blood organs recover in from 10 to 20 days.

After the initial rise of the leucocytes, there is a fall about the end of the second week or the beginning of the third. The red corpuscles may be higher at the end of the treatment. All forms of leukæmia are benefited. The action of benzol is slower than that of X-rays, but may be useful when the latter has failed. Those who have had X-ray treatment react more promptly to the benzol treatment. The results of this treatment appears to be transitory. Small doses seem to stimulate the bone marrow, so that it is necessary to give daily from 3 to 4 grammes in capsules with an equal amount of olive oil. Each capsule should contain about half a gramme.

Under this treatment Korányi reports a case where the white corpuscles dropped from 173,000 to 8,000, and the reds rose from 3,000,000 to 4,000,000. Cases are on record where it does not appear to have reduced the white cell count, but the other symptoms were improved. Other observers, as Wachtel, Stein, Billings, Neumann and Klein, report favorable instances of this treatment.

Drs. Jerome Meyers and Thomas Jenkins sum up their article in the *New York State Medical Journal* thus: "Benzol is a valuable ad-

dition to the therapy of leukæmia of all kinds. Its institution, however, is so recent, and clinical experience still so scanty, that definite conclusions as to its intrinsic value should be held in abeyance."

INTESTINAL STASIS.

Sir Arbuthnot Lane has been in the limelight for some time. So it has always and will ever be with the man who breaks away from the traditional pathway and strikes out for himself. But such men are those who make other men think, and this leads to discovery. Some of Sir A. Lane's teachings may not stand the test of time, but enough will to place him among the leaders of medical men, thought and surgical advance.

In the *New York Medical Journal* of recent date three articles appeared on chronic intestinal stasis. These were by William Seaman Bainbridge, A. Judson Quimby, and W. Van Valzah Hayes. These contributors approached the subject from a study and observation of Lane's cases, from the report of the work of other men, and from their own study and actual experience.

Dr. Bainbridge starts by quoting Lane's definition of stasis, and points out the evil effects of faulty intestinal drainage. The prevention of the condition of prime importance and remarks that with proper medical treatment, at the proper time, nineteen out of twenty cases should never reach the surgeon's table. He also lays emphasis on the fact that too great delay in trying medical measures may lead to the need for a very severe operation. In other words, may mean the difference between short-circuiting or a colectomy. Dr. Bainbridge does not hesitate to perform either of these operations if milder measures fail. He speaks of intestinal cases under three heads—those yielding to medical treatment, those relieved or cured by such an operation as gastro-enterostomy, and those of the advanced class where short-circuiting or colectomy become necessary.

Just how far the work of Lane may lead us, time alone can determine. There is now no longer any doubt as to the value of Lane's operations. This method of treatment opens the door of hope to many a person who would be otherwise condemned to chronic invalidism.

Dr. Quimby in his article states that all cathartics, laxatives, oils and enemata should be avoided prior to the examination, and remarks that the effect of these may last for 36 hours. He then goes fully into the mechanics of intestinal stasis and its diagnosis. He divides the cases into simple mechanical obstructions, simple obstructions combined with organic changes, and organic obstructions without mechanical

phenomena. When the intestine is sharply bent out at any point, it requires much more force to pass its contents along its canal. Such bends are caused by adhesions. Stasis may also result from adhesions or bands giving rise to pressure. When these kinks are caused by adhesions or compressing bands, there is no other treatment but the surgical of any value.

Dr. Hayes goes into the subject exhaustively also. He quotes from Lane thus: "By chronic intestinal stasis, I mean that the passage of the contents of the intestinal canal is sufficiently delayed to result in the production, in the small intestine especially, of an excess of toxic material, and in the absorption into the circulation of a greater quantity of poisons than the organs which convert and excrete them are able to deal with."

Among the obvious indirect changes that result from this condition, Dr. Hayes cites the following:

- a.—Infection of the gums, causing the condition commonly described as pyorrhœa alveolaris.
- b.—Tuberculous infection, when not produced by direct inoculation.
- c.—Rheumatoid arthritis. This, like tubercle, cannot develop except in the presence of defective drainage of the gastrointestinal tract.
- d.—Infection of the genitourinary tract, either directly or indirectly, through the blood stream, by organisms other than tubercle, producing nephritis, cystitis, pyelitis, endometritis, salpingitis, etc.
- e.—Development of changes in the thyroid gland, whether as adenomatous tumors, general enlargement of the thyroid, or exophthalmic goitre.
- f.—Still's disease.
- g.—Infections of the skin of a pustular nature.
- h.—Infection of the large intestine by organisms which produce the several varieties of mucous and ulcerative colitis.
- i.—Ulcerative endocarditis.

Under the question of diagnosis, Dr. Hayes remarks that attention should be given to the following points:

- (a)—Dilated duodenum (D.D.) shown by a marked tympanites in the area behind the right rectus muscle to the right or posterior to the pylorus and lying between the liver above and the transverse colon below. The dilated duodenum is made out by precussion with pressure.
- (b)—Pressure paradox (P.P.) In cases of dilated duodenum pressure is made backward and upward for thirty seconds by the hand placed just below the umbilicus, the patient being in a semi-recumbent position. This will permit the duodenum to empty itself.
- (c)—Inflated ileum (I.I.) This is revealed by a marked tympanitic note to the left of and below the cæcum.

(d).—Corded colon (C.C.) The left colon may be found as a rope-like body beneath the abdominal wall. This is due to spasm of the bowel just above the sigmoid flexure.

On the subject Dr. Hayes discusses diet, exercise, medicines, and, finally, surgery. He is of the opinion that this should not be thought of in the great majority of cases, but is indicated in cases that do not respond to persistent and competent medical treatment.

THE ONTARIO MEDICAL ASSOCIATION.

This association will this year meet in Toronto on 26th, 27th and 28th May. An excellent programme is in preparation. It is intended to make the work of a practical character, and, with this end in view, there will not be as many papers as usual. There will be, however, an interesting symposium on syphilis by Drs. Ellis, Bates, McVivar, Jones, Fidler, Strathy, Armour and others.

There will be some important addresses. There will be one on medicine by Dr. Libmann, of New York; on surgery by Dr. Finney, of Baltimore; on gynaecology by Dr. Watson, of Toronto, and on the care of the criminal is expected from Hon. W. J. Hanna.

There will be a series of clinics and demonstrations at the various hospitals. An effort will be made to render these thoroughly practical and interesting.

The usual entertainments will add much to the pleasure of the annual meeting. There will be a business session.

The most important topic will be that of the relationship of the Ontario Medical Association to the Canadian Medical Association. No one would wish to do any harm to the latter organization, but, on the other hand, every practitioner in the Province must feel the responsibility that rests upon him to do the best for the Ontario Medical Association. We feel that this can only be done by securing for the Provincial association complete autonomy.

It is quite evident now that the Ontario Medical Association cannot do as good work and fill as useful a place, while it remains a branch of the Canadian Medical Association. Along the independent route there is a first place for the Ontario Medical Association, whereas, as a branch of the other association there is a doubtful second place for it.

It is to be hoped that a large number of the profession of Ontario will make an effort to be present. These reunions are of the greatest value. Apart from their scientific side there is the social one, too. If the medical profession is guilty of any mistake more to its detriment than any other it is the one of keeping too much aloof from each other. The attendance this year should prove the reverse to be true.

VACCINATION.

There are few subjects in the whole realm of medicine that is more frequently discussed than vaccination, or more fiercely objected to by some people. Their grounds for objection are threefold: That of being compelled to submit to it; that it is not a protection; and that it is not devoid of danger.

In looking over the January issue of the *Vaccination Inquirer and Health Review*, one finds much material for sincere regret. The publication is written with considerable ability, and is, for this reason, more dangerous than if poorly edited. There are many statements that might appeal to those who are not informed on this complicated subject.

An attempt is made to turn to the advantage of the anti-vaccination cause a remark of the late Lord Lister. On one occasion he said that the Germany army was *absolutely* free from smallpox. Lord Lister explained by saying that the copy of his speech had the word "practically," and that the other term had been used while speaking from memory. Now let us look into the matter closely. From 1834 to 1887 there were 8,124 cases and 339 deaths in the entire army. This gives an average of 153 cases per year, and 6.4 deaths. This is a most remarkable showing in favor of vaccination.

But let us look a little further into the German army statistics. Of the foregoing number of cases, 4,277 occurred at the time of the terrible Franco-German war, with 223 deaths out of the total of 339 for 53 years. It will be recalled how prevalent smallpox was in the French army at that time, and it would be remarkable indeed if there were not some cases in the German army coming in contact with the French soldiers as the German soldiers did. But see what happened in the French army. It is on record that it lost from active service 23,000 men through the ravages of smallpox.

The *Inquirer* takes much satisfaction out of the facts that the anti-vaccinationists have made a good deal of headway in obviating the necessity to submit to vaccination, and that unvaccinated persons may be admitted to the civil service. The *Inquirer* states that in 1908, 17.3 per cent. of births were exempted, while in 1912 the percentage had risen to 31.6. This is gloried in as great progress.

There are many other statements in the *Inquirer* that might equally well be called into question, but enough to show the method of reasoning. In the fact that the objector has been allowed exemption, the anti-vaccinationists forget that this is not a concession to their views, but an application, so general in British government, of the principle of not forcing the minority unduly, but to allow a large measure of individual liberty in such matters.

Then the anti-vaccinationists forget that epidemics vary very much,

and that smallpox is not always of the same severity and accompanied by the same fatality. They also give but little credit to the value of preventive medicine. When a person is taken ill with smallpox he is at once isolated. All this, however, does not lessen the great protective value of vaccination. The *Inquirer* and such like publications make the most of the dangers of vaccination. The medical profession know that this need be no deterrent. A case against the protective value of vaccination has not been made out.

CAPITAL PUNISHMENT.

This subject comes up from time to time. Recently it was fully discussed in the House of Commons at Ottawa on the motion of Mr. Bickerdike. The mover made out a good case. Several took part in the proceedings, when the matter was dropped on motion of Hon. Mr. Doherty, Minister of Justice.

Now let us look at things as they are, and try to be absolutely unbiased. In the first place, women are not hanged. They may commit a murder of the most revolting character, yet they will be reprieved. Now, murder is murder, no matter whether committed by a man or a woman.

In the second place, a large percentage of those who are convicted have their sentences commuted to imprisonment. If one will only take the trouble to look into these cases, the commutation is brought about by influence or a wave of sentiment. Here the merits of the matter are not really considered.

Then we have the painful fact that some quite innocent persons have been hanged. This is too serious a matter to be overlooked.

But hanging does not prevent murders. This has been proven again and again. One person kills another in heat of temper, or while insane, or in cold blood for gain, or out of revenge. Capital punishment does not deter these.

But many fall back upon the Scriptural argument. We welcome this, and are prepared to show that there is no emphatic and definite demand in the Scriptures enjoining capital punishment. We will not follow this further just now, but if any one is disposed to call this statement in question, we will give our proofs.

Finally, capital punishment does not prove its value as compared with countries that do not impose the death penalty. One must compare like conditions. It is not fair to contrast Italy with Britain. It is fair to compare Michigan with Illinois. When like people are compared then capital punishment as a deterrent breaks down completely.

We have no sympathy with weak sentimentalism in dealing with crime, but this is no reason why we should continue in use an exploded and discredited method of punishment.

ORIGINAL CONTRIBUTIONS

THE USE OF DIGITALIS IN PRACTICE.*

BY R. D. RUDOLF.

THE use of digitalis in practice dates from about the end of the 18th century, when Withering wrote his classical work entitled: "An Account of the Foxglove and Some of Its Medical Uses; with practical remarks on Dropsy and other diseases"—but foxglove had been used by the laity for centuries before this in the treatment of dropsy.

Withering states that his opinion was asked concerning a family receipt for the cure of dropsy. He was told that it had long been a secret of an old Shropshire woman, who had sometimes made cures after the doctors had failed. The receipt contained some twenty ingredients, among which Withering recognized foxglove to be the essential one. The remedy was to be pushed until vomiting and purging occurred. Withering was impressed with what he learned and for the next ten years tried the drug in many cases of dropsy in his private practice and in hospital cases. Only after that time did he consent to publish his results, and even then only on the urgent solicitation of his friends. "It is much easier to write upon a disease than upon a remedy," he wrote, "The former is in the hands of nature, and a faithful observer with an eye of tolerable judgment cannot fail to delineate the likeness; the latter will ever be subject to the whims, the inaccuracies and the blunders of mankind." The history of this drug shows well the truth of these pregnant remarks. Few remedies have been so much recommended by some, and condemned by others, for all manner of conditions, but all through its chequered career at the hands of the profession the truth has stood forth that nothing else possesses such power for good in dropsy associated with a weak, rapid and irregular heart.

Withering's direction for the use of digitalis hold as good to-day as when they were written in 1785. "Let the medicine be continued until it acts either on the stomach, kidneys, pulse or the bowels; let it be stopped upon the appearance of any one of these effects, and I will maintain that the patient will not suffer from its exhibition nor the practitioner be disappointed in any reasonable expectation." He stated that about 30 grains of powdered leaf, given in doses of 1 to 3 grains twice daily were necessary to produce a commencement of the nausea. By such treatment not only would the dropsy be relieved but he found that the drug "had a power over the motion of the heart to a degree as yet unobserved in any other medicine."

*Read before the Perth Medical Association at Stratford, 14th January, 1914.

Since that time digitalis has been credited with many actions besides the relief of dropsy. Thus Traube taught that its greatest power was in reducing fever and in producing a favourable local effect in pneumonia, and it is interesting here to note a recent remark of Dr. S. Solis-Cohen (1) that the toxins of pneumonia seem to be able to neutralize quinine and digitalis so that enormous doses of these drugs may be given without producing cinchonism or digitalis poisoning. But although digitalis had been vaunted in so many conditions nothing of striking clinical value has been added to what Withering had written until quite recent years, when the measurement of blood pressure and the study of the heart's action by the polygraph and the electro-cardiograph have thrown so much light on the way that the drug acts and on the kind of cases that most benefit by its administration. To James Mackenzie especially do we owe most of this recent accurate knowledge, and he has shown, and it has been abundantly confirmed, that the patients most likely to benefit by digitalis are those in which dropsy is associated with a rapid irregular heart and a fibrillating auricle.

The pharmacology of digitalis commenced some thirty years ago when Schmiedeberg discovered the active principles. A great deal of work has been done since then on these glucosides, but much about them remains uncertain. It is generally admitted that none of the four best known ones—digitoxin, digitalin, digitalein nor digitonin—give the full effect of the whole drug. Hence most of the modern clinical work has been done with the ordinary digitalis, either in the form of the tincture, the infusion or simply as the powdered leaf. Gottlieb states that about 50% of the digitalis action is due to the digitoxin which it contains, the other 50% being due to the other bodies present.

The action of digitalis on normal mammalian and frogs' hearts consists chiefly of a mixture of two influences: viz.—inhibition through the vagus and stimulation of the heart muscle. The result is a slower but stronger beat, the heart getting more rest and at the same time doing more efficient work. If the drug be pushed then the vagal action predominates and the heart is very slow and irregular; at a later stage the muscle stimulation predominates so that the heart becomes fast again and may finally stop in systole, with fibrillation of the auricles. This final stopping of the frog's heart is taken as a physiological standard of the drug and a "frog unit" often used is the amount of digitalis that will stop the frog's heart in 30 minutes.

Clinically, in doses that the human subject can stand, digitalis has very little effect indeed in slowing the normal heart or producing diuresis. A heart must be at a certain pathological state in order to readily respond to the drug, and hence it is hard to interpret the effects of digitalis in diseases in pharmacological terms.

Pharmacologically the chief cause of the slowing of the heart is due

to stimulation of the inhibitory apparatus and may be almost completely removed or prevented from occurring by the use of atropine, but when this is applied to man the analogy often breaks down, for we find that after digitalis the heart often will not hasten when we paralyze the vagus with atropine, and hence the digitalis must have some other action in steadying the heart than merely an inhibitory one. That atropine has no stimulating action on the ventricle is well shown in heart block where the drug hastens the auricles by freeing the heart from vagus control, but the ventricles go on at their old rate. Digitalis has been shown by Cushny to have no effect in lessening the conductivity of the heart in dogs and yet it undoubtedly does this in some human hearts, as shown by the lengthening of the a-c interval and also the occasional occurrence of partial and even complete heart block after its use.

Pharmacologically the drug seems to increase irritability, so that a frog's heart, which has stopped after a prolonged perfusion with salt solution, may often be caused to beat again if a little digitalis be added to the solution. But in the diseased heart the excitability usually appears to be lessened by digitalis and this is probably one reason why the heart in auricular fibrillation beats more slowly after the administration of the drug. This lessened irritability is probably due to the improved nutrition of the heart muscle. But occasionally with large doses the irritability of the heart muscle is increased as shown by frequent extrasystoles, and at last even by fibrillation. This is also shown by an effect that may be occasionally observed in a case of complete heart block, where after the administration of digitalis the ventricle is hastened.

Pharmacologically the drug increases the force of the contractions of the heart and also raises blood pressure, partly by this increased efficiency of the heart and partly by a vasoconstriction. The result is that the blood tends to be less in the veins and more in the arteries. This raising of the blood pressure does not occur to any extent in normal man, as will be discussed later.

As already said, digitalis is chiefly of value in cases of dropsy where there is a rapid irregular heart in a condition of auricular fibrillation. In rapid but regular hearts it has almost no action, at least when used in medicinal doses, although I presume that if enormous doses were used we might get some effect, as do the pharmacologists. Hence the drug is of little service in the rapid hearts of toxæmia, infections and purely nervous conditions. This want of action is variously explained. For instance, Solis H. Cohen, as already mentioned, thinks that in toxæmia the toxins and the digitalis glucosides neutralize each other. On the other hand, Mackenzie says that the heart is already so under the influence of these poisons that the digitalis will not act. It seems to me, however, that we do not need these explanations, unless indeed they will

also explain why digitalis has so little action in medicinal doses on the normal human heart. As already said, we need a special pathological condition of the heart, such as occurs in auricular fibrillation, before we can get the full action of the drug from medicinal doses, and this special condition does not happen to exist in toxæmia, infections and other conditions in which the heart is of normal rhythm.

All the same, there are very many keen clinicians who firmly believe in the value of digitalis in many of these conditions, and possibly there may be an improvement in the tone of the heart and in the strength of its systole, although the effect on its rate is so slight.

Although there are many heart conditions in which digitalis has so little evident value, there yet remains the large class of auricular fibrillation ones in which its action is often marvellous. These fibrillating cases are characterized by a totally irregular pulse, in which the beats vary in size and in time of appearance. There is usually old mitral disease. Some 60 to 70 per cent. of all heart cases who seek hospital care are found to be of this class. Most of them are the sequence of old rheumatism. A few are due to sclerosis, however, and these are found not to respond so well to digitalis. Until quite recently it has been believed and taught that digitalis had a marked power of raising the arterial blood pressure clinically, as it undoubtedly does pharmacologically, and hence that it was contraindicated in conditions where the pressure was already too high, but certainly this effect is a very slight one and has been completely denied by some writers. However, Marvin (2) showed last year that in experiments on healthy students a rise of 13 mm. of mercury followed the administration of a single dose of 20 mins. of tincture of digitalis, with an average slowing of the pulse rate of 8 beats. Moreover, there is no doubt that when the pressure is low from broken compensation it will greatly rise as a result of the administration of digitalis. Thus in the case of a dropsical arteriosclerotic man who came into the hospital with a pressure of 120 mm., we got a rise of 100 mm. as a sequence of digitalis and he left the hospital with a pressure of 220 mm., and yet feeling much better. In such a case 220 mm was his normal.

On the whole, I think that the common dread of digitalis in arteriosclerotic cases is unfounded. If the pressure be still high it will not go higher under the treatment, and if temporarily low from threatened heart failure it will rise as the heart improves, but not beyond what is best for the already abnormal individual.

Occasionally it may be well to combine some vaso-dilator, such as the sodium nitrite, with the digitalis, but this will seldom be required. At the same time we must remember that these arterial cases, in which the heart breaks down secondarily to the arteriosclerosis do not as a rule respond well to digitalis, even if auricular fibrillation be present.

They are more benefitted by a therapy directed to the relief of their toxæmia; e.g.—a lacto-vegetarian diet, free purgation and diuresis, and occasionally markedly so by venesection.

A word may be said here about the frequent fallacy as regards the pulse rate, when this is only counted at the wrist. Where the ventricular systoles are not all of equal size and force, as is generally the case in auricular fibrillation and also in extra-systoles, many of the weaker ones fail to reach the wrist and hence are not to be there counted. The difference between the pulse as counted at the wrist and the pulse as counted at the apex is called the "pulse deficit." Thus if the pulse at the wrist be 60 and at the heart be 100, then the deficit is 40. Now as the heart improves under digitalis this pulse deficit becomes less and at last may disappear, every beat which occurs being registered at the wrist. A fallacy may come in here, and may often be seen when one studies hospital records where the pulses are as a rule taken in a routine way by nurses. Thus in the example given the heart may as it grows stronger beat only at say 70 per minute instead of 100, and yet, as all the beats now reach the wrist, the pulse will have appeared to have risen to 70, a rise of 10 beats. It is this pulse deficit that digitalis has the special power of lessening. W. D. James and T. S. Hart have recently (3) called attention to the fact that digitalis raises the "average blood pressure" in these cases. If one takes the systolic pressure in such a case, it will be found that the greater the pressure in the cuff the fewer the beats that will reach the wrist until at last, say at 120 mm., none come through. It was this difficulty in measuring the pressure in such cases that made James Mackenzie give up the attempt, but James and Hart state that if at each 10 mm. of pressure the number of beats coming through be recorded an average may be made, and this average pressure is raised by digitalis.

As regards the administration of digitalis, when compensation has broken down, it is well to push the drug till some effect is obtained. From a $\frac{1}{2}$ drachm to $1\frac{1}{2}$ drachms of the tincture a day in divided doses is usually sufficient. The first effect is seen about the third day and consists in a strengthening of the pulse waves so that the amplitude of the beats increases and the pulse pressure is raised. Next diuresis sets in and next the heart slows. When the true pulse gets down to 60 or 70 the drug should be stopped, but often before this result is obtained it has to be stopped on account of nausea, diarrhoea or headache. After some days, too, the pulse may assume a coupled rhytm, which is also a sign that the patient has had enough.

If the diuresis be insufficient to relieve the dropsy or be tardy in appearing, some *purin* body, such as caffeine, may be combined with the treatment with advantage. Or Guy's pills may be used, which are more diuretic than the plain digitalis. When compensation has become

more or less restored, a moderate dose of digitalis may be given, such as 10 drops of the tincture twice daily, and this may be continued with advantage for long periods. These patients often learn the exact dose which best suits them. I saw in London last summer a man who had been taking such a dose for about seven years on Dr. Jas. Mackenzie's advice, and had thus kept himself able to do light manual work. Fraenkel has shown that digitalis does not lose its effect under long continued administration so that we need have no fear of a tolerance being established.

Some cases of broken compensation only come under the doctor's care when they are *in extremis*, and in them one cannot wait for days for the action of digitalis. Here *strophanthin*, either intravenously—or intra-muscularly given, is of great value as its powerful digitalis-like action occurs within a short time. Further, if the cyanosis be very marked, venesection is often life-saving. In this way the desperately ill patient may perhaps be kept going until the digitalis given by the mouth begins to act.

So far we have been discussing heart cases that first come under treatment with compensation more or less broken down and the most that can be hoped for is that they may be temporarily restored to a fair state of health. But the vast majority of heart cases are not in this low state when first they consult their doctor for some of the signs and symptoms of threatened decompensation, and in such cases, besides all the general directions which must be given to them as to diet, rest, etc., small doses of digitalis taken for long periods may be of great value and may *prevent* the threatened break-down. This is a point that I do not think is sufficiently brought out in Mackenzie's work, but was much emphasized by the French therapist, Huchard.

Administration. As already said, the active principles of digitalis are all uncertain and can be little relied upon in practice. Perhaps the best is Nativelle's crystalline digitalene. This is a favorite in France and owes its popularity to Huchard. It consists chiefly of digitoxine, and one granule corresponds in action to about 15 drops of the tincture of digitalis. Most of the digitalines on the market are impure and uncertain in action. They are mostly mixtures of digitalin and digitonin, and, although the dose recommended is usually 1-100 grain, Dixon says that it should be $\frac{1}{4}$ to $\frac{1}{2}$ grain to get any effect. As regards digitalis itself, the common belief is that the galenical preparations are very uncertain in strength. James Mackenzie, however, believes that the difference in action depends more upon the nature of the case than on any difference in strength of different samples of the drug. He found that 15 minims of the tincture, 1 Nativelle granule and one Guy's pill all about corresponded in strength of action. All the same it is known

that the glucosides of digitalis readily undergo decomposition, forming resin-like bodies, which are very toxic and which in animals will produce convulsions by acting on the medulla. It is possible that the occasional cerebral symptoms that arise during the administration of the drug to man are due to the same cause.

Digitalone is a tincture from which the irritating matters have been removed and is occasionally useful and may be given both hypodermically and by the veins. It is said to be unirritating, but I have seen a good deal of local discomfort produced by it.

Digipuratum, which we owe to Gottlieb, is an excellent form in which to give digitalis. It contains all the active principles of the drug, but is standardized and moreover is very stable and also non-irritating. One gram of it equals 80 frog units. It is thus of the same strength as the powdered leaf, but more certain and less irritating. I have used it a great deal and have always found it reliable. Digitalis may produce nausea and vomiting in two days: (1) by direct irritation of the gastric mucous membrane, and (2) after some days by irritation of the vomiting centre. The first has been shown by experiments on cats not to occur with digipuratum (4). It is quite common to see nausea and vomiting as a result of cardiac failure, and such cases are relieved by digitalis, and the drug should never be withheld in an otherwise suitable case simply because nausea and vomiting exist. Twelve tablets of digipuratum, corresponding to 96 frog units, will usually produce a marked digitalis effect. I have usually given them as suggested by the makers—4 the first day, 3 the second, 2 on the third and fourth, and 1 on the fifth day; but many patients will stand and require far more than that amount before we get the full effect. Thus I have one patient in the hospital at present who has taken three tablets a day for 12 days with nothing but benefit.

The infusion of digitalis is a favorite with many, but must be freshly prepared. Certain theoretical objections have been made to it, on account of the fact that digitoxin is insoluble in water, but, as is so often the case with theoretical objections, in practice this does not hold, and many physicians prefer the infusion to all other preparations. Probably the digitonin, as a saponin body, helps to hold the digitoxin in solution.

Contraindications for the use of digitalis are not many, but the drug is too often given in a haphazard way in cases where it can be of no use and in this way is relied on where other remedial measures should instead be used. In cases of partial heart-block it is distinctly contraindicated and may be dangerous, by suddenly increasing the block. It has long been believed that it should not be given in aortic regurgitation, the theoretical argument being used that as the drug prolongs the dia-

stole it allows of a longer leakage. Where the case is one of pure aortic regurgitation the medicine will probably not be indicated anyhow, but where mitral regurgitation sets in secondarily, or is conjointly present, then the drug does good. If digitalis be stopped as soon as any of its physiological effects appear—nausea, vomiting, diarrhoea, headache, slow and especially coupled heart-beats—then probably no danger is run by its use. As already said, if other indications are present, the mere existence of high blood pressure is no contraindication to its use.

I have made no attempt in this communication to give a complete description of digitalis, but merely to bring out some of the most important of its marvellous powers for good in the right class of cases.

REFERENCES.

1. Solomon Solis Cohen. Recent Improvements in the Quinine Treatment of Lobar and Lobular Pneumonia. Trans. Amer. Ther. Soc., 1913.
2. Marvin. Archic. of Internal Medicine. Ap. 15, 1913.
3. James & Hart. Amer. Jour. of the Med. Sciences. Jan., 1914.
4. Ther. Gazette. Feb. 15th, 1913.

THE LANE PHILOSOPHY.

BY ERNEST A. HALL, M.D., C.M.,

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FORTUNATE is he, who, while following the investigations of leaders, has the privilege of coming directly in contact with them. This was the good fortune of the writer during his recent visit to Europe. Metchnikoff in Paris and Lane in London have given us a new philosophy of surgery and are leading us through the misty mazes of medical superstition onwards toward the fountain of perpetual youth. These men are honest observers of nature and their theories deserve consideration. They have given us somewhat startling statements regarding our digestive tube, and tell us wonderful stories based upon comparative anatomy and the activities of modern civilization. They see the end of the reign of Beecham, and the convenient phrase of the physician of to-day "auto-intoxication" vanishing into empty nothingness. The principles enunciated by these men are destined to revolutionize much of our medical practice and place it upon a saner foundation. Some of us may not be able to accept their teachings *in toto*, but after meeting both of them, and following closely for several weeks the work of Sir Arbuthnot Lane, I am convinced that the message of to-day to our profession is from the surgeon of Guy's Hospital.

Lane is no doubt the most disliked surgeon in London. This is the greatest compliment that could be paid him. How I quietly smiled as

I listened to the smaller lights consign the Lane activities to the nethermost abyss. One prominent surgeon stated that he would rather have his throat cut than have any such work done upon him, and then told me of two cases that were dying after having been operated on by the Lane method. This was of course unanswerable, for he never lost a case, and further, no one ever died in London in the hands of any other surgeon but those of Mr. Lane (sic).

When a man or his methods are so universally ridiculed by those of our profession who "hunt in packs", that is the man I shall go out of my way to see. A man who is worth so much abuse is worth knowing, and his word is worth considering,—a man surely of original thought and unique parts, one whose acquaintance may be cultivated with advantage.

Dr. Will Mayo told us years ago that in medical matters it is better to think wrongly than not to think at all. It is better to come to the light, observe the facts, and endeavour to judge impartially, than to mope in ignorance or find fault. I therefore decided to remove as far as possible all prejudice, pro and con, regarding this line of surgical work and follow Mr. Lane during the three weeks of my time allotted to London.

This "slayer of innocents", this man with "more kinks in his brain than in the abdomens of his patients," I found to be the essence of courtesy, more than considerate to his subordinates, more than kind to his patients, respected by those who understood him, beloved by those in daily contact with him, the focus of an interest that, since the passing of Lister, has not centred around any London surgeon. He has more surgeons of eminence and medical men from abroad visiting his clinic than that of any other man in London. He is the storm-centre of to-day's surgery. It reminded me of years ago when Lawson Tait of Birmingham confounded the London men by his researches in pelvic surgery. Pus tubes in those days were confined to the provinces as kinks are to-day in London, but Tait lived to see pyosalpinx in London in spite of the ignorance and prejudice of the men upon the staffs of the great London hospitals. Possibly history may be repeated. In fact already Newcastle, Leeds, Edinburgh, and America are finding what Lane taught them to see,—but London still sleeps. What the profession for years has admitted as being the principal cause of chronic disease,—intestinal auto-intoxication,—Mr. Lane deals with directly, first in determining the causative agent, and then removing it.

As a surgeon Sir Arbuthnot ranks with the best. His work upon cleft palate and fractures is well known to the profession and stands unequalled and unchallenged, but when we touch his work upon the bowel for the relief of chronic intestinal auto-intoxication, the row begins.

I have watched him operate, I have followed his work, I have seen his cases, and unless he and his house surgeon and assistants are more than ordinarily capable of misrepresentation, the head sisters of the wards either hypnotized or deluded, it is my humble opinion that the greatest surgical contribution of the last quarter of a century originates in and emanates from Guy's Hospital.

When not only the accepted condition of intestinal toxæmia also pernicious anæmia, asthma, melancholia, Still's disease, rheumatoid arthritis, exophthalmic goitre, tuberculosis of bones and joints and glycosuria find in short-circuiting of the bowel their most active foe, the time for ridicule is past. Lane deals with fundamentals, nature recognizes and responds.

No progressive surgeon can afford to pass this man and his work without serious consideration of the principles upon which that work is based, and the scientific accuracy with which it is carried to such an astonishing success.

Much of medicine must now be re-written in terms of drainage, and more of it forgotten. As an indication of the achievements of to-morrow let me announce that while many sleep, some sit up rubbing their eyes, and fancy they read that "diabetes is but a septic pancreas." Let the wise man relieve intestinal obstruction, allow free drainage, and nature will do the rest. In other words "trust in God and keep the bowels open."

To my fellow practitioner I would say, read what Metchnikoff has written re the comparative anatomy and physiology of the large intestine, and then "read, mark, learn, and inwardly digest," what Sir Arbuthnot Lane has written regarding both large and small intestines, and if the reader be not then a wiser man the writer will present him with a year's subscription to the *Lancet*.

SURGICAL COMPLICATIONS, TREATMENT AND PREVENTIONS.*

(SELECTED.)

By C. P. THOMAS, M.D.,

THE life of an active practitioner of surgery is not, as is supposed by some, one of constant bliss and sunshine, for in addition to the enormous amount of mental strain he is under while actually operating, because of the gravity of the cases he undertakes, and the risks

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to which he must submit both himself and patients, he must be constantly on the outlook for the unexpected to follow in the way of complications, many of which, so far, I believe, are unavoidable. Rapid, uninterrupted recoveries are so frequent after operations that I fear we sometimes forget the grave and serious conditions that may occur.

I will endeavor in this brief paper to outline some of the more common unfortunate complications which may occur and a few means of prevention.

Admitting that every preliminary precaution has been taken in advance of the operative procedure, in the way of careful examination of the physical conditions, of the urine, feces and blood, etc., nevertheless any of the following unforeseen complications may occur:

1. Death from Anesthesia.
2. Death from Acute Nephritis.
3. Death from Pulmonary Embolism.
4. Regional Death from Arterial Thrombosis.
5. Death from Hyperthyroidism, from an Unrecognized Graves' Disease.
6. Death from Hemorrhage from the Mucous Membrane of the Alimentary Tract.
7. Phlebitis, with or without Suppuration, with Possible Death.
8. Parotiditis, with or without Suppuration.
9. Acute Dilation of the Stomach.
10. Acute Gastritis.
11. Pneumonia, or Acute Hypostatic Congestion of the Lungs.
12. Non-Union of Bones or Soft Tissue.
13. Cystitis and Pyelitis.
14. Post-Operative Hernia.
15. Delirium Tremens.
16. Unrecognized Lesions.

During the past twenty years, the writer has had at least one patient with each of the above-named complications, and some of them have been seen many times following some surgical procedure, which may or may not have been severe, and he will endeavor to describe them briefly, with suggestions for their prevention and treatment.

1. *From Anesthesia.* In 1897, I lost a large, bony miner from chloroform, less than one drachm having been administered, on an open mask, and before the operation had been begun. He had been on a protracted spree, was in poor condition for the anesthetic, and was suffering from tubercular osteitis.

I thereupon abandoned chloroform and have since used gas and ether exclusively. I have had ether administered to patients in large numbers, with severe heart lesions, and to others who had chronic

nephritis, without its producing any apparent increase in the heart or kidney trouble. Spinal analgesia has but a limited field of usefulness and Crile's combination analgesia may yet be more generally adopted.

2. *Acute Nephritis*. This has followed surgical procedures, regardless of the anesthetic used, in a small percentage of cases. Some have been severe with complete suppression, and have died; others less severe and have recovered. I am of the opinion that nephritis can best be avoided by keeping the patient and operating room warm and free from drafts; making the operation as short as possible; giving the least amount of anesthetic that is consistent with good work; doing as little manipulating as possible of the intra-abdominal organs and providing ample drainage for infected cavities to prevent absorption.

Good team work on the part of the surgeon and his assistants is also absolutely essential to avoid the frequent occurrence of this complication, and such work can not be maintained if he be an infrequent operator, or is constantly changing his assistants or place of operation. A thoroughly trained anesthetist should be a part of the team.

3. *Pulmonary Embolism*. Death from this complication has occurred several times; once on the fourth day after a vaginal hysterectomy; once on the second day following a compound fracture at the ankle joint; once following perineal prostatectomy, and other deaths have occurred in which it was believed, but not proven, that this condition existed. I have no suggestion for prevention.

4. *Arterial Thrombosis*. This caused complete obstruction of both popliteal arteries once, following vaginal hysterectomy. Both legs became gangrenous from the knees down; the patient was too weak and anemic to permit double amputation, and died from exhaustion a few days later. I have no suggestion for prevention of this complication.

5. *Hyperthyroidism*. This has been observed a few times, coming on a few hours after some superficial operation in which there was no possibility of unseen hemorrhage, and with no other complication, death usually taking place the second or third day. During recent years, since the diagnosis and treatment of Graves' disease have been more thoroughly understood, I have had no trouble from this source.

6. *Mucous Membrane Hemorrhage*. Persistent vomiting of blood, and melena, have claimed three patients from me, following simple abdominal operations. All of them had been operated for fairly severe appendicitis. The treatment of the appendix stumps was such that the hemorrhage could not possibly have come from that source. The hematomesis came on in two of them, but a few hours after operation, and death in about eight hours.

The third one come on the twenty-first day after the operation, and the post-mortem showed the blood to have come from the entire mucous

tract. Authorities differ as to the source of alimentary tract post-operative hemorrhage, some claiming gastric or intestinal ulcers, others that it comes from simple oozing from the mucous membrane where no ulcer exists. This was certainly the condition in the one we examined post-mortem. The free administration of horse serum to all persons suspected of being bleeders, would probably prevent this complication.

7. *Phlebitis*. This condition has occurred in a small percentage of laparotomies between the eighth and twentieth days, particularly in simple appendectomies with no apparent wound infection, and the left femoral vein is the one usually involved.

The wound infection theory as to the cause of this complication, and the fact that the left external iliac vein differs somewhat, anatomically, from the right in its relation with the artery, is probably the correct one. The early recognition of the complication, with proper treatment by ice bags, rest and elevation during the acute stages, will shorten its duration very greatly. I have never seen this form of phlebitis go on to suppuration, or have a pulmonary embolism, but recovery is often very painful and slow.

8. *Parotiditis*. This complication has followed a number of times. Those recognized early, and treated by ice-packs and early puncture, and which have not gone on to suppuration, have recovered, while those beginning at the end of the first forty-eight hours after a very septic operation, with suppuration, usually terminate fatally.

There are four theories as to the cause of this complication. One, that it is through the sympathetic system, because of the well-known relation existing between the ovaries and the parotid glands. This is, however, scarcely tenable, since parotiditis is an occasional complication of operation not involving the ovaries. Two, that it is a manifestation of a general septic condition. This is not always true, however, since in several cases observed by me, the infection was regional and not general. Three, that of infection through the ducts from the mouth. The mouth is notoriously foul and infective following septic surgical operations and one can easily conceive of an ascending infection thus taking place. Proper care of the teeth and mouth should especially be enforced just before and after the operation. Four, that of metastasis. This is, I think, also a feasible explanation. Traumatism by a careless anesthetist is a possibility.

9. *Acute Dilatation of the Stomach*. This usually comes on the first three days after an abdominal operation, and is a grave symptom, manifested by frequent vomiting of very large quantities, with evidence of great shock and exhaustion, and is apparently unavoidable. Treatment consists of early stomach lavage, sitting posture, enemata to relieve gas from the lower bowel, and heart stimulation. Cathartics are

contraindicated for this condition, until after the dilatation symptoms have subsided.

10. *Acute Gastritis.* This condition comes on soon after operation, due probably to swallowing saliva and mucous heavily laden with ether, and has been observed in a number of cases, manifested by severe acid vomiting in small quantities, beginning from 36 to 48 hours after operation, continuing for two or three days without peritoneal inflammatory symptoms. Treatment consists in stomach washing and the administration of a small dose of morphine and atropine hypodermically, repeating in five or six hours if necessary. These last remedies are, I believe, the ones to which the greatest credit should be given, morphine allaying the irritability of the stomach and the atropine lessening the amount of secretions.

11. *Pneumonia and Hypostatic Congestion.* The latter condition has been observed quite frequently, especially in old people who have been submitted to severe surgical operations. They can be best avoided by the sitting posture and frequent position changing. The administration of morphine and atropine preceding the operation which lessens the quantity of ether necessary, and dries up the secretions of the mouth, thus preventing filling of the lungs with mucous discharges, is, in the writer's opinion, a good means of preventing post-operative pneumonia. The stomach should also be empty to prevent vomiting and inhalation of stomach contents. Drafts should be avoided, and the chest, neck and arms be well covered by warm clothing for several days following the operation.

Septic pleurisy, perhaps by metastasis has been observed two or three times following operations for severe pelvic infection, once causing death.

12. *Non-union of Bones.* This is usually due to one or more of the following conditions: Non, or imperfect coaptation of fractured ends; improper immobilization; infection from without or within; syphilis of tuberculosis.

Non-union of Soft Parts. This is generally due either to inaccurate coaptation of tissues, infection, disease of the pancreas, excessive suture tension from hematoma, swelling, carelessness in suture tying, or intra-peritoneal distention, or it may occur in persons greatly reduced by long continued illness.

The writer has had three abdominal incisions open, twelve days after closure. Immediate re-suture with through and through silk worm gut, without anesthesia has been followed by recovery in all, but with one hernia. The writer believes that catgut closure alone of the ordinary abdominal incision without fascia overlapping is sufficient and should be reinforced by wormgut left in ten days.

13. *Cystitis*. This is usually due to careless, rough or unclean catheterization, but is sometimes due to ascending infection, from lack of cleanliness of the vulvar region. Pyelitis is probably secondary to cystitis by ascension, but may be hematogenous. The prevention of cystitis consists in the avoidance of catheterization when possible, otherwise by careful, clean catheterization, followed each time by irrigation with a saturated boric solution. When present, treat early in injecting one drachm daily of ten per cent, argyrol solution into the empty bladder. When due to colon bacillus, Coli vaccine mixed strains should be used.

14. *Post Operative Hernias*. These are due either to infection, preventing primary union, improper coaptation and suture of tissues, including improper suture material; incisions which cut across the muscle fibre instead of along their course, or long lateral incisions which destroy the nerve supply, causing atrophy of the muscles between the incision and median line.

Excessive muscular action too early may cause hernia, even after good union. The writer has no sympathy with the "very early out of bed and to work" advice of some surgeons, and I believe in the most accurate coaptation of abdominal fascia with figure eight wormgut stitch, without the use of too many buried sutures.

15. *Delirium Tremens*. This is not an uncommon complication following operations, even in young persons who have been heavy drinkers. It can probably be best avoided by keeping the patient on a given amount of liquor for the first week after operation.

16. *Unrecognized Lesions*. Several deaths have occurred from alimentary tract stenosis, either malignant or simple, when the operation was done entirely for the relief of some other trouble. At least three patients have died from pyloric or duodenal stenoses which were not suspected before, or discovered at the time of the operation.

Chronic narrowing of any portion of the tract below the stomach, if not corrected, will increase and become more acute after an abdominal operation, because of the general intestinal paresis, stagnation, etc., which invariably follow. The remedy then is reasonably liberal incisions, with careful examination of all intra-peritoneal organs whenever possible, with immediate resort to any steps necessary to remove additional lesions or to correct the deformities resulting therefrom.

One of my objects in presenting thus briefly the above sequela and complications of surgery is to warn the surgeon against promises of sure cures.

The shock to the relatives of a patient who dies suddenly from any of the above complications is always severe, and is worse if they have been told that there is no danger, and a promise of an early recovery made.

One of America's foremost surgeons said to me early in my career, that life was hardly worth living for a surgeon until his reputation was such that people would permit him to operate without first promising a cure, or making the statement that there was no danger from the procedure.

It is the writer's custom to invariably reply to the question, Is there any danger in this operation? that every operation is attended with some danger, and endeavor forthwith to impress it upon them by stating just about what the death rate is, or has been in his hands from the procedure advised.

We must admit that even operators of the greatest experience, still have these unforeseen complications and deaths, and while, in our time, we will probably not be able to prevent all of them, it is my hope that some of them will be avoided, and that in the meantime our friends of the laity may become so well informed regarding the unforeseen complications of surgery that a reasonable toleration on their part will make the work of the operator somewhat easier.—*California State Medical Journal*.

MANAGEMENT OF INGUINAL HERNIA IN CHILDREN.

W. F. Campbell (*Med. Rec.*, 1912, lxxxii, 111) says that after the age of two years, if the hernia still persists, the truss should be abandoned and a radical cure performed because: (1) The chances of cure steadily diminish up to the age of puberty. (2) Truss pressure causes atrophy of the underlying muscles, thereby diminishing the protection afforded by the muscles, and lessening the chances of radical cure. (3) The wearing of a truss interferes with proper exercise and thus interferes with bodily development. The child who wears a truss is handicapped in the struggle for existence. (4) The cures by truss are often apparent, not permanent. There are many recurrences. (5) Radical operation removes at once the serious handicap with all its disagreeable sequelæ by establishing normal conditions. (6) With the age limitation mentioned above it is the author's experience that the younger the child the more satisfactory the results of operation.—*Amer. Jour. of Diseases of Women and Children*, May, 1912.

CURRENT MEDICAL LITERATURE

MEDICINE.

SOURCES OF ERROR IN THE USE OF THE STOMACH TUBE FOR DIAGNOSIS.

HARMER AND DODD (*Archives of Internal Med.*, November 15th, 1913) report their investigations into the possible sources of error in the use of the stomach tube for diagnosis, from their experience that the unaided stomach tube occasionally fails to detect the bismuth meal and Roentgen-ray. In order to determine the cause of this inefficiency the course taken by the tube was watched with the fluoroscope, and it was noticed that in several cases the end of the tube did not pass directly to the most dependent portion of the stomach, but the tip first touched a portion of the stomach wall well above the most dependent portion. As more tube was passed the end slid along for a varying distance and then became impinged against the stomach wall so that, on still further passage of the tube, the end remained fixed, and a downward bowing of the tube into the lower portion of the stomach occurred. This dependent loop increased in size as more tube was passed, the tip sooner or later slipping from its fixed position and passing upward toward the cardia, thus becoming further removed from any residuum which may have been present in the stomach. On passing still more tube the end may follow about the wall of the stomach and eventually reach its most dependent portion, or the tip may skim the surface of the residuum and only drain a portion of it. Thus the degree of stasis may be underestimated, or a considerable amount of residuum may entirely escape detection by the tube. In order to ascertain why the tip of the tube may become deflected on emerging from the oesophagus instead of passing directly to the most dependent portion of the stomach, stomach tubes were passed through glass tubing about the length and diameter of the oesophagus, and it was frequently noticed that the tip of the stomach tube on emerging from the lower opening deflected from the long axis of the glass. This is accounted for by the fact that stomach tubes are usually kept coiled up, so that they require a tendency to curve, which is responsible for their deviation from the straight course on emerging from the lower end of the oesophagus, and the success or otherwise of passing a stomach tube depends in part upon the tightness with which it has been kept coiled, and on its flexibility. If the curve of the tube accommodates it-

self to the curve of the stomach wall, and if the tip does not become impinged, it will reach the most dependent portion, and deductions will be correct, but the reverse will happen if such accommodation does not take place and the tip become impinged. Attempts to allow for the curving tendency by starting the tube in such a position that when it emerged from the lower end of the glass tube its tip should point in the right direction were unsuccessful, since it was found that, in passing, it became revolved in a way which could not be prevented with certainty. The proportion of successes and failures is also dependent upon the posture of the patient and upon the position which the stomach occupies in the abdominal cavity, as in cases of gastroptosis, where the degree may be underestimated or an insufficient length of tube passed. Their observations make it obvious that failure to recover gastric residuum with the unaided stomach tube from a fasting stomach, or after the ingestion of a test meal, cannot be accepted as conclusive evidence of the absence of gastric stasis.—*British Medical Journal*.

ARTIFICIAL PNEUMOTHORAX IN LARYNGEAL TUBERCULOSIS.

Some observers have expressed the opinion that when pulmonary tuberculosis is complicated by a laryngeal affection, treatment by the production of an artificial pneumothorax should not be undertaken. Kink, on the other hand, wishes to set up the thesis that practically every pulmonary and laryngeal tuberculosis can be treated with marked advantage by this method (*Muench. med. Woch.*, September 2nd, 1913). In going through the cases in which he has treated tuberculosis with artificial pneumothorax, he has found that 12 out of the 75 which were materially benefited by the treatment were suffering from a laryngeal complication. All the milder cases were cured. He gives details of 5 severe cases, from which it transpires that, save in 1 case, no further treatment than the pneumothorax and the application of a powder or menthol solution locally, together with complete rest of the voice, was used. In 1 case an intestinal tuberculosis rendered the case more refractive to treatment than the others, but in all the rest the laryngeal signs and symptoms healed promptly and satisfactorily. In a number of cases he is inclined to regard the cure as permanent. He ascribes the good results to the stopping of the fever, the arrest of the progress of the pulmonary disease, checking of the severe and frequent attacks

of coughing, and the limitation or suppression of the sputum. The fact that the artificial pneumothorax rapidly affects a disappearance of the bacilli from the sputum is, in his opinion, also a powerful factor in the healing of the laryngeal affection. He proposes to publish the result of his general experience of this method of treatment of pulmonary tuberculosis. In the present communication he states that he would only refrain from applying the artificial pneumothorax in cases with laryngeal complication when there is a non-localized perichondral process, especially of the epiglottis, and when the tuberculosis of the epiglottis is productive of severe dysphagia and is characterized by ulcerative processes extending over the whole of the inlet of the larynx and accompanied by oedematous swelling. These cases always end fatally, and not even an artificial pneumothorax is capable of altering this fact.—*British Medical Journal*.

A SUBSTITUTE FOR CARBON DIOXID SNOW.

The use of carbon dioxid snow is becoming more and more popular in dermatology, but, unfortunately, the apparatus is expensive and the technic not always simple. For superficial cauterization, G. Knauer recommends trichloroacetic acid as equally as efficient and much simpler, but care should be exercised that none of the acid touches the healthy skin. It is, therefore, always best to paint a zone of collodion around the affected area. The acid is first liquefied with one or more drops of water, then applied with a glass rod. The cauterization is always very superficial unless the acid is actually rubbed into the tissues. A second application is only rarely necessary, and should not be done until the first scab has fallen off. The cauterized tissue will appear white as snow and the surrounding area will show only a moderate hyperemia. Vesicles never form and the cauterized area will turn brown after several hours. After eight or ten days the scab can generally be loosened. The cosmetic results are excellent and the scars appear like those after carbon dioxid treatment and are much sightlier than those following cauterization. Trichloroacetic acid is indicated wherever carbon dioxid snow has been used, except that the latter is more convenient to use where large areas are to be cauterized.—*Münch. med. Woch.*, Mar. 7, 1911.

TREATMENT OF PERNICIOUS ANEMIA.

J. A. Stealy, in the *Lancet-Clinic* for February 15, 1913, recommends Croftan's plan of administering hydrochloric acid to all cases

of pernicious anemia showing diminished gastric acidity. The stomach being considered in these cases as an inert sac with scarcely any digestive or propulsive function, rich food is poured into it and artificial digestants—chemically pure HCl and pepsin—added. Ten to fifteen drops of the acid are given in mucilage water a few minutes after each meal, and the dose repeated in thirty minutes. For the preparation of the mucilage water, which is employed to prevent injury to the gastric mucosa by the acid, one ounce (30 grammes) of pulverized acacia to one quart (1,000 c.c.) of water is used. One-half glassful of the mucilage water is used to each dose of the acid.

It is important to carefully regulate the dose of the acid, for if too little is given the patient will not reap the benefit of the treatment, while if too much is given he will not retain the acid. In cases of complete achlorhydria, twenty drops of the strong acid may be given, generally in two-thirds of a glassful of the mucilage water, while in some cases where the hypochlorhydria is slight but five drops may be needed. The dose should be changed in each individual case from time to time, less of the acid being required as the patient improves and the gastric production of hydrochloric acid increases. It is unnecessary to make periodic examinations of the gastric contents for the purpose of regulating the dose. One can tell from the patient's symptoms whether or not the dose is suitable. Excessive burning in the stomach or emesis after taking the dose is proof of the production of too great an acidity.

In addition to the acid treatment, the author administers sodium cacodylate daily by deep intramuscular injection, commencing with three-quarter grain (0.05 gramme) doses, finally to reach a six grain (0.4 gramme) dose, and then gradually diminishing in frequency to every other day, every third day, etc. The diet is made a generous one, the various articles of food being prepared and served in the most appetizing way; psychotherapy is practised in the sense of giving verbal encouragement to the patient.—*New York Medical Journal*.

PYODERMATITIS AND ITS TREATMENT.

Laporte (*Gazz. degli Osped.*, August 26th, 1913) deals with the common types of pustular superficial skin lesions usually due to staphylococci or streptococci. He first discusses the dry impetigos commonly seen on the face in the form of pityriasis and a true streptococcic infection. The treatment is to wash with boracic lotion, then apply glycerol of starch, and if this is not sufficient one can use a solution of salicylic acid in alcohol (ac. salicyl. 1 gram, alcohol 10 grams, aq. 90

grams), and after that a weak calomel ointment. In the more obstinate cases he uses a sulphur, or oil of cade ointment. Next he discusses the common impetigo, and points out the importance of looking out for any primary irritant—for example, pediculi. Special varieties are impetigo of the hairy scalp, epidemic pemphigus neonatorum, and a rare variety simulating tuberculosis verrucosa. To remove the crusts of impetigo he advises a spray of an aqueous solution of resorcin (1 in 200), followed by compresses soaked in the same solution or in vaseline. When the crusts are removed, he suggests some weak antiseptic, for example, aqua d'Alibour, followed by a zinc ointment, to which may be added later some calomel or yellow oxide. The next group are the ecthymata due to staphylococci. There are two rather special varieties mentioned, namely, a deeply excavating type often confounded with gumma, and the other an ulcerating type seen in little children and simulating syphilis, but differing from this in selecting prominent surfaces—for example, the convexity of the thigh and the nates. By opening the early pustules and swabbing with tr. iodi the spread of the disease may be curtailed considerably. Folliculitis, sycosis, certain forms of acne and furunculosis are also discussed, and brief mention is made of anthrax and elephantiasis. Speaking generally, the syphilitic lesions are situated on an indurated base, whilst the pyodermitides are on a soft base.

—*British Medical Journal.*

SEROTHERAPY OF CROUPOUS PNEUMONIA.

It was once firmly believed that croupous pneumonia should be one of the first infections to yield to antibody treatment; for the events of the crisis appeared to depend purely on some phenomenon of chemical union, akin to the combination of toxin with its antitoxin. As serotherapy failed utterly at the outset many plausible explanations were given for the unsucess; while believers in specific therapy began to modify their sera accordingly. At a recent session of the Medical Society of Nürnberg Feith considers this subject. He prefers to rely upon Römer's serum, as constantly modified. The serum is polyvalent not only because of the number of strains of bacteria comprised, but because several different sera are utilized (from the horse, sow, sheep, etc.) Whenever this serum is injected into a pneumonic patient the immediate results are euphoria and fall of temperature. There is no influence exerted on the crisis or extension of the process. There is undoubted improvement in the sputa. The author is certain that the treatment has some positive effects. Of seven severe cases (double pneu-

monia or involvement of upper lobes) but one resulted fatally. The author admits, however, without any qualifications, that we have in Römer's serum no "theropia sterilisans magna."—*Medical Record*.

DIABETES INSIPIDUS WITH TUBERCULOSIS OF THE PITUITARY GLAND.

L. Borelli (*Giorn. della R. Accad. di Med.*, Turin, 1913, lxxvi, 91) describes the case of a man, aged 31, who had tuberculous periostitis at 9, and was operated on for tuberculous maxillary glands at 29. About four and a half months before his death he complained of anorexia, nausea, fever, and inability to do his work. Two months before his death the vision of his right eye failed completely in four days, beginning on the external side (of the field of vision?). At the same time the sight of his left eye began to fail, particularly on the external side. Six days later he was taken into hospital with faint perception of light in his left eye, blind in his right eye, very thirsty, and with occipital headache that prevented him from sleeping at night. The urine exceeded 6 litres a day, and bowels acted regularly; the gait was normal; there was a small amount of exophthalmos, which the patient said he had always had. He was very deaf in his left ear, less deaf in his right ear. The thyroid gland was not enlarged, the heart and lungs were natural, the spleen was normal, so were the sexual organs. The blood count showed 80 per cent, of hæmoglobin, 3,320,000 red cells, 12,500 white cells per cubic millimetre, with a moderate lymphocytosis. The cutaneous tuberculin reaction was positive, the test for alimentary glycosuria was negative. The exophthalmos increased, the cheeks looked myxoedematous, and ptosis of the right eyelid appeared. A month later a skiagram showed that the sella turcica was normal, the patient was delirious; six weeks after this the patient died comatose. At the autopsy the brain was oedematous, the pia mater contained numerous tubercles, especially at the base and along the Sylvian fissures. In front and at the sides of the sella turcica, and in the middle cerebral fossae was a rounded mass of newly-formed tissue, 5 cm. in diameter, 1.5 cm. thick in the middle; it was caseating, yellow-grey in color, with an irregular surface; it raised up the dura mater and had eroded the bone a little. Its anterior part included and involved the hypophysis; below the optic chiasma was a caseous node partly involving the optic nerves. The caecum and appendix were tuberculous, but the kidneys were sound both to the naked eye and microscope. It was found that the tuberculous mass had entirely destroyed and replaced the nervous and paraneurotic (posterior) parts of the gland; and had also invaded the antero-superior and lateral parts of the glandular (anterior) lobe, leav-

ing about four-fifths of it untouched. This uninjured part seemed unduly rich in fibrous tissue, rich in blood vessels, free from colloid secretion and from hæmorrhages; the secreting cells here preserved their characteristic staining reactions, the eosinophile cells being increased in number. The invading tuberculous tissue was rich in giant cells; no traces of the nervous or paranervous lobes could be discovered. Numerous urinary analyses are detailed. The author combats the generally accepted view that irritation of the paranervous lobe of the pituitary gland is the main or only cause of diabetes insipidus. Administration of extra quantities of sodium chloride to his patient showed that there was complete inability to secrete a concentrated urine, until towards the end when coma appeared; the specific gravity varied from 1004 to 1008, and the addition of sodium chloride to the diet augmented the quantity of urine passed (from 5 to 10 litres), but did not increase its specific gravity. Borelli thinks it more reasonable to assume that the diabetes insipidus was due to irritation of the base of the brain, particularly of the region around the third ventricle, the corpora mamillaria, and the posterior perforated space.—*British Medical Journal*.

INFANTILE PARALYSIS.

On Wednesday, August 27th, and again on Friday, August 29th, by request, Dr. Roland Meisenbach presented before the Fourth International Congress on School Hygiene some research work pertinent to infantile paralysis. Dr. E. W. Saunders, of St. Louis; Dr. Roland Meisenbach, of Buffalo, and Dr. W. E. Wisdom, of De Queen, Arkansas, have been working on an entirely new theory as to the cause of infantile paralysis. Owing to the fact that the work bears so directly upon the health of the school child, the Congress requested its presentation at this time, although all of Dr. Meisenbach's work is not entirely completed.

Several weeks ago, before a specially called meeting of the St. Louis Medical Society, Dr. Saunders stated that he believed that acute paralysis in children was caused by the injected larvæ of some fly. Dr. Meisenbach stated that it had been known for some time that during epidemics of infantile paralysis there occurred simultaneously disease among animals, chiefly one which had all the characteristics of meningitis; the cause not being known. A few weeks ago there appeared in De Queen, Arkansas, and on the border of Texas, an epidemic of infantile paralysis, and at the same time an epidemic of limber-neck among the chickens in that locality.

The larvæ taken from the carcasses of these limber-neck chickens

were collected and fed (not injected) to different animals, namely, monkeys, guinea pigs and chickens, and the results noted. The larvæ were first triturated in glycerine and fed to the animals orally. All of the animals showed signs of an acute paralysis in different degrees, the degree depending upon the dose of the virulent toxic larvæ and the size and resistance of the animal. Guinea pigs became paralyzed in ten to forty-eight hours after receiving five to ten virulent larvæ; monkeys required 106 to 150, and chickens much larger doses. If the dose was large, often death occurred in a short time, due to paralysis of respiration, and the local paralysis was not marked. In the animals that received smaller doses local paralysis manifested itself in twelve to thirty-six, and even forty-eight hours.

The symptoms noted, especially in the monkeys, where they could be accurately observed, were early coryza and lachrymation, with loss of appetite, rise in temperature and rapid respiration. The eyes quickly became slightly clouded, so that it was easy to recognize which animal had received the virulent larvæ. The monkeys showed a profuse nasal discharge and lost their voice; the later symptoms were local motor paralysis, and in some animals subnormal temperature and finally death. In other animals to which the toxic larvæ were given in small doses recovery took place; the latter was especially noted in the chickens. These animals given repeated small doses became somewhat immune.

One of the most convincing animals shown to the Congress by Dr. Meisenbach was the dog. A large Irish Setter which inhabited the infected zone was seen to eat the carcasses of the limber-neck chickens. He developed a motor paralysis of both hind legs. The paralysis existed thirty days, after which the dog was bled to death for pathological purposes.

This work differs distinctly from anything which has been done in connection with infantile paralysis. The fly theory of others was not directed to the causative factor, as much as to the transmission from the human being to the animals, and from animal to animal by means of the bite. The authors are now working on incubating some of the larvæ. Dr. Meisenbach stated that the research required much work and that the pathology was being done in the most accurate way.—*Buffalo Medical Journal*.

ACTION OF OXYGEN, HYDROGEN DIOXIDE, AND OZONE. GAS ON CERTAIN BACTERIA.

Dr. S. E. Finch, in *The New York Medical Journal*, concludes his researches in these words:

1. Oxygen in its molecular form O_2 , ninety-five per cent. pure, does not kill or inhibit the growth in the moist state of *streptococcus brevis* or of *bacillus coli*.

2. Oxygen may inhibit the growth of the tubercle bacillus when brought into intimate contact with each micro-organism in the moist state, but does not kill it.

3. In the absence of culture media (organic matter), oxygen inhibits the growth of the aurococcus, and may kill it, after prolonged and intimate contact with each micro-organism in the moist state.

4. Hydrogen dioxide (U. S. P. three per cent.) is an active bactericide for the four micro-organisms tested. The action is dependent upon the amount of the hydrogen dioxide used, the age of the preparation, its strength, and, also upon the presence or absence of readily oxidizable organic matter.

5. Ozone (ozonized air or ozonized oxygen) under certain given conditions is an active bactericide for the four micro-organisms used. Its action is dependent upon its concentration and the intimacy and rapidity with which it is brought into direct contact with the bodies of all bacteria in suspension in water or fluid media.

6. Ozone does not dissolve in sterile water, or in saline solution in more than faint traces; therefore its bactericidal action is dependent upon its passage through these solutions or through any fluid medium as a continuous stream of numerous fine bubbles of gas.

7. Ozone has no selective action for any of the four bacteria in the presence of organic matter.

ANTIBODIES IN LOBAR PNEUMONIA.

The observations and results obtained by different workers on this subject have been so contradictory that P. W. Clough undertook extensive work on the subject and reports on a series of 16 cases (*Johns Hopkins Bulletin*, Oct., 1913). G. and F. Klemperer first demonstrated that immune substances of some sort are found in human serum at the crisis. They showed that the serum of convalescent patients, like that of immunized rabbits, will protect rabbits from otherwise fatal doses of virulent pneumococci. This has been confirmed by Roemer and by Neufeld and Haendel. This protective power has since been denied by Seligmann and Klopstock, Boettcher, and Strouse, who were unable to demonstrate any protective power for mice in postcritical sera. We can account for these different results by the fact the first group of observers used a heterologous strain of pneumococci of relatively low

virulence, while the latter group used stock cultures of relatively high virulence. Strain differences in pneumococci were first demonstrated by Eyre and Washbourn.

Mennes first studied the action of immune serum and leucocytes on pneumococci in the test tube. He found that virulent pneumococci were not phagocyted at all in normal serum, but were rapidly ingested and destroyed in immune serum. He found that the leucocytes of the immune animal, if washed free from the serum, were no more active than those of a normal animal. He did not find any direct bactericidal or antitoxic action on the part of the serum, and hence attributed the immunity to this acquired power of the serum to cause phagocytosis of virulent organisms. Neufeld further showed that the serum acts not by stimulating the leucocytes, but by altering the micro-organisms so as to make them phagocytatable by normal leucocytes. These immune bodies differ from opsonins by the fact that they cause the phagocytosis of a virulent organism not phagocytatable in normal serum and by the fact that they are thermostabile, that is, they resist a temperature of 56 deg. C. for 30 min., and they can be preserved for a considerable length of time. For these reasons Neufeld gave these antibodies the name bacteriotropines.

The work of Neufeld suggested that the errors made by previous observers were due to using a different strain of organism in the tests, from that with which the patient was infected. Therefore in every case the homologous virulent strain isolated from the patient's sputum as early as possible in the disease and before there was any fall of temperature was used by Clough for his tests. The activity of the serum of the patient after the crisis was compared with that of normal serum both as to its power to passively protect mice and its power to promote phagocytosis in the test tube.

The results of Clough's experiments may be summarized as follows:

Of twelve cases in which satisfactory protection tests were carried out, nine had sera which showed definite protective power for mice as compared with normal serum. The sera of three gave negative results; in these three cases but one specimen of serum was tested.

In two of the cases, the serum of which showed protective power after the crisis, specimens of serum obtained during the acute stage of the disease showed no such power. Further, in two other cases, one fatal, in which the serum was examined only during the acute stage, no protection was manifested.

Three sera, which protected mice from the homologous strain, were also tested with an heterologous strain and showed no protective power toward that strain.

With but two exceptions, all the strains isolated were not phagocyt-able in fresh normal human serum and were presumably virulent for man. The two phagocyt-able strains were both virulent for mice and man. This suggests the advisability of greater caution in assuming that the virulence of an organism for man is always parallel with its resistance to phagocytosis in the test tube.

Of eleven cases in which the phagocytic activity of the serum after crisis was tested in vitro, six showed definite activity. In five, negative results were obtained. In some of these, at least, positive results would probably have been obtained had suitable variations in technic been employed.

The phagocytic activity, with one exception, was strictly limited to the homologous strain derived from the patient whose serum was being tested.

The active substances in the serum are bacteriotropines.

The phagocytic activity of the serum ran closely parallel with its protective power for mice. It therefore, seems justifiable to conclude that the protective action of the serum is due to its power of promoting phagocytosis.

A much larger number of cases must be studied before drawing final conclusions as to the role it plays in man. But the fact that such definite phagocytic activity can be shown to develop at the crisis (or lysis) in at least a considerable proportion of cases and that this activity is directed against the one virulent strain infecting the patient makes it seem probable that this factor plays an important part in bringing about recovery in man.

CURATIVE ACTION OF LEUCOCYTIC EXTRACTS IN ACUTE INFECTIONS.

Hiss and Dwyer (*Medical Record*, Vol. 84, No. 11, Sept. 13, 1913, p. 466) report the favorable result coincident upon the use of leucytic extracts in acute infections, taking erysipelas as a type of the latter. Their leucytic extracts were procured by infection into the pleural cavity of rabbits under aseptic conditions of 10 cc. of a 5 per cent. solution aleuronat in starch-meat extract broth. The exudate stimulated by this injection was collected under aseptic conditions, examined for possible infection, centrifuged, and re-examined for infection after incubation. They state the extracts remain active indefinitely.

The results reported show a uniform and striking improvement in every case of erysipelas treated. The dose used was 10 cc. repeated daily if necessary. The conclusions they arrive at are as follows:

1. Leucocyte extract will abort infections (of strep. erysipelas) if given within 24 hours.
2. It will ameliorate the course of other infections and may abruptly terminate them. The longer the infection has endured the less effect has the extract.
3. Toxic symptoms (delirium, headache, nausea, vomiting) are much diminished. Local pain is relieved.
4. Rash is apt to become localized.
5. In infants under 1 year, 66.6 per cent. recovered (as compared with 0 per cent. without treatment).

CAUSE AND PREVENTION OF CARDIO-SCLEROSIS.

Bishop, New York, (*Med. Record*, Vol. 84, No. 12, p. 511), speaking before the International Medical Congress, advances the following theory of cardio sclerosis, the result of his years of work on diseases of the circulatory system:

1. Cardio sclerosis is only part of a general cellular disease whose other manifestations are arterio sclerosis, Bright's disease, fibrosis and presenility.
2. Nature of the disease is an irritation of the cells leading to their damage and replacement by C. T. The nature of the irritation is a reaction against a foreign material which the cells have to deal with in their digestion. It is similar to anaphylaxis (sub, acute).
3. The irritating body is a protien or protein derivative to which the patient has become sensitized as the result of some event (disease) which alters the physiology of the cells.

Based on this theory he advances a treatment for cardio sclerosis and its allies as follows:

1. Symptomatic treatment as case demands.
2. Removal of all proteins from diet and administration of castor oil.
3. Return of proteins one by one, carefully watching the patient to find out which proteins are harmful to him. He calls this the "few protein," rather than the "low protein" diet, because patients are allowed all they want of proteins harmless to them, rather than small amounts of any protein.

SEX HYGIENE.

Probably nothing better illustrates the old adage that a little knowledge is dangerous than the present campaign for the teaching of the so-called sex hygiene in the public schools. The public has just been made to realize by the medical profession the direct as well as the indirect effects of sexual diseases, and the necessity for preventing them. But in its enthusiasm the public has failed to see the proper methods of application and the difficulties of application, as well as the profundity of the whole subject. The enthusiasts seem to think that the ones to be taught are the young, probably on the principle that if they are forewarned of the dangers long before they arise, they will be able to anticipate them. Were the latter a fact the campaign would be well advised. There is little doubt that, while sexual diseases are present in the young, the amount due to ignorance is very little and is negligible. The majority is due to non-sexual infections from adults. Sexual diseases usually have inception in adults and it is the adult who must be educated if he does not already know. It is he who has sufficient understanding to appreciate the real and not the analogous or illustrative value of sex teachings. It is he who must face the world of adversities. And whether moral teaching of the adult will result in continence is still an ultra-medical question. Suffice it to note that merely a proper understanding of the dangers of incontinence alone does not always act as a check, as shown by the fact that infection among medical students is probably as large as among any other student class.

The sex maturity of children of the same mental and physical age varies so much that a general teaching of this subject cannot apply with equal force to all. The likelihood, then, that some will learn it in a hazy and vague manner is especially dangerous, for in discussing this among themselves the subject will become distorted, with an obvious tendency to work harm. Will not the children who have vicious sex habits have the best opportunity to impress them upon the others? It is a question how much the children can learn by sex teaching with plants as objectives, and how far this will go to explain the human organism; or how far the explanation will prevent harm. It is quite possible that the natural propensity of children for experiment will open fields of abuse which ignorance at least would not.

Sex hygiene should be taught—but to the parents. It is too intricate a question for the young, when so many parents are ignorant regarding this subject. Parents should be taught sex hygiene, and they should be taught to impart that knowledge gradually and at the proper time according to the maturity of their own children. The child should get just as much of this knowledge as it is able to appreciate from its phy-

sical, sexual and environmental development. There will then be no danger of experiment and abuse from discussion of the subject between the children.—*Medical Record*.

HIPPOCRATES AND MODERN MEDICINE.

Dr. Edward Baeumer, of Berlin, describes in an essay, *Der Hippokratismus*, some of the remarkable conditions in the medicine of the

The wonderful progress made in the natural sciences during the of Hippocrates.

The disciple of modern medical science, entering into practice armed with a great amount of knowledge and fairly trained in exact methods, finds sooner or later that scientific glory is not all sufficient, not all reliable. He finds that one thing alone is essential—to know how to heal—to become an adept in the art of healing. All knowledge and all science are of value only as a means in the service of the healing art; science is never the art itself.

The wonderful progress made in the natural sciences during the nineteenth century has brought to the front great changes in medicine. With new methods of investigation discoveries after discoveries have been made, and the beneficial influence of natural science cannot be overestimated. Facts innumerable have been disclosed—so many, indeed, that it has become impossible for *one* man to grasp them all; so many that even a specialist cannot master his entire speciality, and specialisms of specialisms have arisen. The whole body of investigators exerting themselves throughout the year are bound to make new discoveries and to publish them; hence a surprising growth of medical literature. And who is able at present simply to survey the valuable publications, not to speak of the ability to separate the wheat from the chaff?

Hippocrates was the first to lay down the basis and the principles of the healing art for all time, and Hippocrates repeatedly in the course of history has been the salvation of medicine. The genuine Hippocrates lives in eternal youth, because the observations of Hippocrates, free from theories, are drawn from the inexhaustible well of Nature, and retain, therefore, their value independent of even the most progressive phase of medical development. Hippocrates inspires with fresh and youthful ardour the researcher who has entered into his spirit, because he does not demand faith in scientific dogmas, but, on the contrary, incites step by step to sober observation. It is true we possess a greater fund of facts and a more intimate knowledge of

anatomy and physiology than he, but nevertheless we can learn from him. He knew no medical "science," he only knew the art of healing.

When we take up the study of Hippocrates we are surprised how modern everything sounds, for we have entered on this study with the idea in our minds, "What can this old Greek teach us, who are so far advanced in knowledge and technic?" We forget that it was Hippocrates who established the fundamental principles of the healing art. The principles and foundation of our art undergo no change, no evolution; hence the eternal youth of Hippocrates. Hippocratism has had, and always will have, an historical mission. He liberated medicine from dogmatism and faith in authority even during the Middle Ages.

What is the significance of Hippocratism in modern medicine? The division of medicine into more and more specialities must lead to untenable conditions, and Hippocratism alone will have to be our salvation.—*New York Medical Journal*.

PRESENT STATUS OF NEOSALVARSAN IN THE TREATMENT OF PARASYPHILIS OF THE NERVOUS SYSTEM.

Dr. Edward D. Fisher, New York: Since the finding of the spirochetes in the brain and cerebro-spinal fluid in general paresis and tabes the term parasyphilis must be discontinued. All diseases of the nervous system due to syphilis are due to the same active agent which is the cause of the pathological changes both in cerebrospinal syphilis and in the more chronic manifestations formerly classed under the head of parasyphilis. The discovery of the spirochetes gives us a rational basis for the use of neosalvarsan. The question arises: What is the relative efficiency of this remedy in the latter manifestations of syphilis of the nervous system, i.e., in tabes and general paresis? In my experience the hopes raised by Professor Ehrlich's discovery have not been fully realized and can not be. We have only to consider the pathological changes in these diseases to understand the reason why. We have, however, with the Wassermann reaction test a rational plan of treatment in the use of neosalvarsan and mercury with iodides. As we find the Wassermann test negative we can stop our medication and resume it as it becomes again positive. It is certainly rational to remove the active agent of disease, as we can by the use of neosalvarsan, and thus prevent further extension of the disease. In the light of our present knowledge, we are in a position to make an early diagnosis, and the importance of beginning treatment early is emphasized. The importance of being conservative in our claims for this most valuable remedy should be em-

phasized as it must be many years before we can know whether its early employment, *i.e.*, at the time of the initial lesion, prevents the later manifestations of syphilis of the nervous system.

Dr. Joseph Collins, New York: I find myself accord with Dr. Fisher in regard to the necessity of once now and forevermore dispensing with the terms parasyphilis and metasyphilis. I am not sure that we all recognize a fact which seems to be a fact, namely, that when faced with tabes and general paresis and what is known under the term of meningeal syphilis, we are not dealing with a nervous disease, but dealing with the disease of syphilis. I understood Dr. Fisher to say that the spirochetes are found in the cerebrospinal fluid. I supposed that they had never been found in the cerebrospinal fluid.

Dr. Philip Coombs Knapp, Boston: The clinical and pathological distinction thus far justify the division into ordinary syphilis and parasyphilis and this is a convenient distinction which I think might still be held. In regard to the use of neosalvarsan and salvarsan my experience has been that there is a good deal still in Ehrlich's original claim that in syphilis of the nervous system the results are not likely to be beneficial as in the early stages of syphilis manifesting itself in other organs of the body. Experience both with neosalvarsan and salvarsan in syphilis of the nervous system has not, on the whole, led me to believe that we have gotten so much more than we had in the use of mercury and iodine. In the last two months I have been trying the intraneural method and thus far the benefits of the method seem to be uncertain and possibly not of sufficient value to warrant the increase of danger that accompanies the use of that method.—*Boston Medical and Surgical Journal*.

DIURETICS.

A general review of diuretics in cardiac disease is given in an article by A. D. Hirschfelder, Baltimore (*Journal A. M. A.*, August 2), who takes up their use in five conditions: (1) infective endocarditis; (2) arteriosclerosis with periodic attacks of the various disturbances associated with localized arteriosclerosis, vertigo, headaches, transitory cardiac asthma or pulmonary edema, angina pectoris and vasomotor crises; (3) chronic or paroxysmal hypertension without edema; (4) acute cardiac overstrain, and (5) broken systemic compensation with chronic passive congestion, and edema with or without general anasarca, ascites, hydrothorax or hydropericardium, arising from myocardial weakness, valvular insufficiency or adherent pericardium. "The first of these need not be discussed as it should not be treated under the head of cardiac disease,

but rather as a primary nephritis. In arteriosclerosis and chronic hypertension, one might be tempted to resort to diuretics to remove autotoxins or relieve plethora, but it is better in both these conditions to spare the arteries and kidneys from overwork and light diet and restriction from salt and water than to try to remove these substances with diuretics. Acute cardiac overstrain is a condition of transient duration when seen in athletes, etc., and can be generally left to cure itself. The chief condition when active diuretic intervention is advisable, is in broken systemic compensation with edema from stasis in the systemic veins, either from failure of the right ventricle, tricuspid-stenosis or adherent pericardium. The literature of this subject is reviewed in detail and Hirschfelder says, "Digitalis is the diuretic of choice in all cardiac conditions with failure of the circulation," and he shows how this is the case. In using it, it is important, as Pratt and Hale have insisted, to obtain a standardized preparation so that one can be certain he is giving an adequate amount of the drug. Hirschfelder thinks that it makes little difference which of the special digitalis preparations or derivatives are used. Other drugs of the digitalis group are mentioned, but it is a question, he says, whether any of them are more efficient. When we desire a more powerful diuresis we can make use of the purin or caffein group—caffein, theobromin, theophyllin or theocin and the most convenient form is the water-soluble acid-theocin sodium in 3-grain doses three times a day. The phthalein test of Rowntree is a simple, quick and easy method of determining the extent to which the kidney epithelium has been damaged or whether it would be too much fatigued by the use of these drugs. If the phthalein is low—30 per cent. or less in two hours—it would be better to rely on digitalis and try to improve the circulation before stimulating the kidney. The same precaution applies to the saline diuretics, though they are probably less irritant to the kidney, and the test is specially desirable when calomel is used as a diuretic. In general we should aim first to know the exact state of the kidneys; second, to improve the circulation with digitalis or to spare it with the karell diet; and, thirdly, to resort to theocin or the saline diuretics to relieve edema if the renal epithelium is not severely injured."

SURGERY

UNDER THE CHARGE OF A. H. PERFECT, M.B., SURGEON TO THE
TORONTO WESTERN HOSPITAL

URETERAL OBSTRUCTIONS AND KIDNEY STONES.

O. S. FOWLER, Denver (*Journal A. M. A.*, January 31), calls attention to obstruction in the ureter as a factor in the production of re-

nal calculus. He has found in his roentgenographic work that in all cases in which the patient had a stone in the urinary tract there was shown an obstruction in the course of the ureter to the free outflow of the urine and he is inclined to consider this as an important cause of the stasis in the urine which is one of the chief causes of calculi. There is only one method of the treatment of the stone and that is its removal. To guard against its recurrence we should insure good drainage of the kidney. The lower calices are, he shows, improperly drained even in the normal position of the kidney and it occurred to him therefore that if the kidney were rotated on its anterior posterior axis during nephropexy and fixed so that the lower calix would be on a level with or higher than the upper one, the patient would have a constant downward flow draining the kidney in all parts. To accomplish this task it is necessary to reinforce the kidney capsule with some stronger material and he concluded to try strips or thongs of fascia lata, one around each pole of the kidney as follows: "While I am operating on the kidney my assistant removes the fascia from the leg by making an incision about 8 inches long in the front and outer aspect of the thigh and removing a strip of the fascia lata 1 inch wide and about 11 inches long. This I divide lengthwise, making two strips each $\frac{1}{2}$ inch wide. These are put in warm salt solution until needed. This fascial wound is closed with catgut and figure-eight sutures of silk-worm gut. I then expose the kidney by the usual oblique incision, without dissecting off the nephrocolic ligament, clear the capsule in the usual manner and free the ureter to remove the cause of the obstruction, the location of which has previously been demonstrated by roentgenoscopy. I next make a series of incisions through the capsule each about $\frac{5}{8}$ inch in length around the kidney at about the junction of the thirds of the kidney; I now lift up the capsule between the alternate incisions and weave the fascial strips through these, leaving the ends free. I do this by beginning closer to the pelvic border with the upper pole and closer to the outside border for the lower pole, for the purpose of giving the proper direction of traction to obtain the desired rotation of the kidney when the fascial strips are brought through the muscles of the back with a large hemostat adjacent to the wound edges. The one from the lower pole is brought out immediately above or below the last rib and the upper one close to the spine just about on a right-angled line from the spine to the outer one." He has performed this operation thirteen times on eleven patients with no difficulty following from the transplanted fascia. The operation is not difficult or tedious and avoids the passing of sutures of any sort into or through the parenchyma and thus causing fibrous degeneration. He believes the method with its transverse position of the kidney is demanded in every case of nephropexy. If the fascial strips should

later slough out they would still hold the kidney in position until sufficient adhesions had formed.

THE PERIOSTEUM AND BONE-TRANSPLANTS.

The disputed question whether the periosteum is absolutely necessary in bone transplantation, or whether, as Macewen and Murphy hold, the diaphysal bone is reproduced from the proliferations of osteoblasts independently of the periosteum, has been investigated by C. A. McWILLIAMS, New York City (*Journal A. M. A.*, January 31). He has gone through Dr. Murphy's reports of transplantations to find out what was done with the periosteum, and finds that in none of them was it absolutely wanting, and the same, he says, may be said of Albee's work. McWilliams reports four cases of human transplantation without the periosteum and all were failures so far as the ultimate outcomes were concerned. The graft was absorbed without the reformation of bone. Two of the patients were reoperated on with the periosteum attached to the graft and in each with success as regards proliferation of bone. All these cases are reported in his paper and commented on. A number of animal experiments are also reported and the results may seem somewhat contradictory. Thirty-eight of the transplantations without periosteum were successful and another factor it seems must be called in, and this, he thinks, is the presence of an adequate blood-supply. His conclusions, somewhat condensed, are as follows: "1. If the periosteum be excised from an area of bone and a section of bone within this area going into the medullary cavity be removed (not however, involving the whole diameter of the bone) and the endosteum scraped away as well, then it is found that the cavity fills in perfectly with the new bone, which of necessity must come from the old bone alone. This is probably due to the fact that the nutrient artery is intact. 2. If a section of the whole diameter of a bone be removed, then the bone will regenerate between the ends of the fragments if the whole or a part of the periosteum be preserved, bridging the defect. 3. If a section of the whole diameter of a bone be removed, very little subsequent filling in of this defect by bone will take place if the entire periosteum has been removed from between the ends of the fragments. 4. With a living graft taken from the same patient, its future life depends on a sufficient blood-supply without regard to periosteum or contact with living bone. 5. If minute fragments of a living graft are transplanted, the periosteum may be disregarded as the osteoblasts in the fragments may not die if there is an easy access of blood to them, but may grow and coalesce. 6. With larger pieces transplanted it is safe to leave the periosteum attached be-

cause of its efficient blood-supply which may cause the bone to be reformed. 7. A graft on a graft, neither having periosteum, will not live. 9. The splitting of a periosteum of a graft, even though the graft is entirely surrounded by it, is positively unnecessary." From all these facts the conclusion seems irresistible, he says, that to insure oneself of any bone grafts living they should be transplanted with as much periosteum as possible covering their surface. The article is illustrated.

ACUTE APPENDICITIS IN INFANCY AND CHILDHOOD.

W. G. Vincent finds that acute appendicitis occurs under the age of fifteen years much more frequently than is commonly supposed, and demands consideration because of its frequency, and of its often insidious development, obscure symptomatology, special difficulty of diagnosis, and other peculiarities when affecting infants and children. The disease is most frequent in patients from five to fifteen years, rather uncommon under five years, and rare under two, and male children appear to be more often affected than females. The conditions we are most frequently called upon to differentiate are, gastroenteritis, pneumonia, diaphragmatic pleurisy, and intussusception. Among others occasionally to be differentiated are, subphrenic abscess, mesenteric glandular tuberculosis and localized tuberculous peritonitis, general peritonitis of unknown origin, fecal impaction, typhoid fever, strangulated hernia, pyosalpinx, inflamed ovary, or ovarian dermoid cyst, pyelitis affecting the right kidney, stone in right kidney or ureter, inflamed undescended right testicle, duodenal ulcer, intra-abdominal tumors, acute infections of right hip joint, and malaria. The author believes that, except in rare instances, we should no longer consider that there is a medical treatment of acute appendicitis. The preoperative treatment consists in rest and fluid, or on diet except water, and the ice bag as a placebo, if thought advisable, while waiting to confirm the diagnosis; no active catharsis while any doubt exists. After the diagnosis of acute appendicitis is made, possibly the ice bag or coil and opium in some form may be employed while preparation is being made for the operation, which should be done as soon as possible.—*New York Med. Journal.*

VACCINE IN APPENDICITIS.

Appendicitis, says G. H. Sherman, M.D., D etroit, Michigan, is a disease in which surgery has achieved most brilliant success, and yet there are still too many deaths from the disease.

Many of the unfavourable results no doubt are due to operative interference being delayed until too much extension of the inflammatory process has taken place, but unfortunately there are also fatal terminations after early operations.

Some fifteen years ago I was called to see a young married woman who had just become ill with a chill and severe pain with tenderness on the right side. A diagnosis of acute appendicitis was made and a surgeon called to take charge of the case. An immediate operation was decided upon. There was no extensive inflammation, but there was a small amount of pus around the appendix, walled off by inflammatory adhesions. The appendix was removed and drainage provided. In two days the woman was dead from septic peritonitis. There was no bacterial examination made of the pus found but from the severity of the case and the rapid fatal termination, I am satisfied that this case was a strepto-coccus infection.

Fundamentally all cases of appendicitis are an infective process due to a low resistance to the organism causing the infection. From this, it naturally follows that any method of treatment which will retard the development of growth of these pathogenic organisms without hindering tissue repair is of benefit. Cold applications have been extensively employed for this purpose but it has been found that while the ice-bag will retard inflammatory extensions, it will also hinder the development of inflammatory adhesions which are necessary to confine the infective area.

Active immunization is the most important factor in limiting infective processes. This active immunity develops as a consequence of the existing infection, but in many instances it does not develop in time to prevent extensive destruction of tissue in the infected area. In appendicitis, inflammatory extensions are particularly dangerous because the entire peritoneal cavity with its enormous area for toxic absorption is liable to become involved. Bacterial inoculation of killed suspensions during the course of an infection will stimulate and hasten the establishment of an active immunity, and extensive experience has also demonstrated that the earlier in the course of an infection the inoculations are made the better will be the results.

This principle of stimulating an active immunity with bacterial vaccines is being effectively applied in treating appendicitis, especially cases in which the early acute symptoms indicate very toxic conditions and it is considered advisable to postpone operative interferences until these symptoms have somewhat subsided. Bacterial vaccines are of estimable value in hastening the establishment of an immunity. With-

in twenty-four hours the temperature will naturally drop, the pulse will become better, pains begin to subside and the patient will be in a much better condition, generally, to operate upon than before the vaccine was given. Furthermore, the immunizing response thus developed will materially lessen the danger of post-operative extension of the infection.

This principle holds good in all operative cases of appendicitis. Where abscess cavities are drained it is found that the wound heals more readily, the patient runs less temperature after the operation and makes a more rapid recovery. Where the vaccine is given a day before the operation the dose should be repeated on the day of the operation. Where an immediate operation is decided upon the vaccine should also be given at once and repeated the next day.

Cases of appendicitis where operative measures are not considered necessary will be found to do better with the use of bacterial vaccines than with any other treatment. Many of these cases will make complete recoveries, showing improvement soon after the first inoculation. If a relapse should take place, vaccines should again be employed and the case operated upon after the acute symptoms have subsided.

Naturally, autogenous vaccines could not be applied in this way and the proper selection of a stock preparation is very important. Bacterial examinations of pus from appendicular abscesses show colon bacilli constantly present. Where streptococci or pneumococci are present the clinical symptoms are usually of a more serious character, the infection being almost invariably mixed with two or more of these organisms present. For this reason a mixed vaccine containing all these organisms should be used.

Some would criticize the use of such a vaccine on the ground that a vaccine might be given to which no corresponding infection exists. Others would consider it an equivalent to a "shot-gun" prescription and not scientific.

These criticisms are not valid because it can do no possible harm to immunize against an organism where no infection corresponding to the vaccine exists, and furthermore, mixed vaccines cannot be compared to incompatible drugs, there being no antagonism in their immunizing properties.

Aside from all scientific considerations the last test of the therapeutic value of a remedy consists in its application in the treatment of disease. Here mixed vaccines have demonstrated their value as prophylactors in surgical cases of appendicitis and as curative agents where surgical interference is not necessary.—*The Medical Times*.

THE MODERN DIAGNOSIS OF CANCER OF THE STOMACH.

The clinical methods for the diagnosis of cancer of the stomach, says Savignac, after a careful examination of the patient and his history, are the following: (1) Examination by X-rays; (2) examine for blood in the fæces; (3) examine the gastric juice; (4) estimate the anti-tryptic power of the serum (*La Presse Médicale*, December 29, 1913). He gives some attention to each of these tests. For the presence of blood to be tested the patient must be put on a diet free from hæmatin and care must be taken that no blood is present from other sources, piles, or nose, etc. The presence of blood denotes some lesion in the intestinal tract. It is worth remembering that rest and milk diet usually arrest pretty quickly a hæmorrhage due to gastric ulcer but not so soon one due to cancer. In testing the gastric juice the chief points are (1) the absence of free hydrochloric acid, and (2) the presence of lactic acid. The following are some recent tests to which importance has been attached: (a) Salomon's reaction consists in testing for albumen in the liquid from a lavage of the stomach made fasting; a positive reaction denotes the presence of gastric ulceration. (b) The tryptophan test is based on the presence in the stomach, in cases of new growth, of a ferment analogous to trypsin. (c) Loeper and Binet's test. The stomach is washed out before breakfast in the morning and then a second lavage with 250 c.c. of normal saline is made. The sediment is centrifugalized and examined microscopically. If there is a new growth, cells characterized by their shape, size, staining and powers of resistance will be found. (d) The fourth test is that of estimating the antitryptic index; in cancer the index is raised. Savignac regards anything under four as normal, over four as abnormal. In a great number of conditions other than cancer the index is above four, so this test must only be regarded as of value in conjunction with the other tests and methods of diagnosis.—*Universal Medical Journal*.

TONSILLOTOMY AND TONSILLECTOMY.

In an article in the *Boston Medical and Surgical Journal* of 2nd October, on "Indications for the Relative Values of Tonsillotomy and Tonsillectomy," Goodale, of Boston, draws the following conclusions:

(1) It has not been demonstrated that complete removal of the tonsils is following by harmful effect upon the general system.

(2) Tonsillotomy involves usually less trauma than does tonsillectomy; but in the latter the method of removal is of primary import-

ance, a sharp dissection down to the tonsillar artery, with snaring of the vessels, giving the least amount of inflammatory reaction.

(3) Of the two operations, tonsillectomy shows a larger percentage of septic complications, due both to the greater trauma usually occasioned, and also the relatively larger number of septic conditions where of late years an operation is undertaken.

(4) The relative frequency of post-operative hæmorrhage is not definitely established, but in view of the available methods of treatment it is no longer a serious complication if dependent upon local causes.

(5) While gross deformities of the parts involved are not likely to follow tonsillotomy, yet cicatricial occlusion of the lacunar orifices is frequent, and may lead to an intensification of the original chronic inflammation. Tonsillectomy in unskilled hands may be followed by marked and injurious distortion, but with good technique should have no other alteration than an approximation and occasionally a partial fusion of the pillars.

(6) The indications for operation should be determined by the pathological changes of the tonsils, which are actually a detriment to the individual.

(7) Simple hyperplasia, if obstructive or favoring catarrhal conditions, and if persistent, may be sufficiently treated by a tonsillotomy, especially in children.

(8) The systemic ill-effects of chronic tonsillitis may be increased by a tonsillotomy. Complete removal is here preferable to a partial one, although mild cases of chronic inflammation may be sufficiently relieved by appropriate treatment without excision.—*Universal Medical Journal*.

GYNÆCOLOGY

UNDER THE CHARGE OF S. M. HAY, M.D., C.M., GYNÆCOLOGIST TO THE
TORONTO WESTERN HOSPITAL.

MANAGEMENT OF THE GRAVE EMERGENCY CASES OF EXTRA-UTERINE PREGNANCY.

Farrar Cobb, of Boston, presents a study of 137 cases of tubal and interstitial pregnancy at the Massachusetts General Hospital during the nine years from 1902 to 1910, the object of which was to obtain information in regard to the wisdom of immediate operation in the desperate cases of rupture with severe hemorrhage.

The cases were divided into two classes: (1) The grave emergencies, with sudden symptoms followed by alarming hemorrhage, which cases need operative treatment at once; it is this class of case to which the writer has paid special attention, the number of which is 36. (2) The non-emergencies, with less alarming symptoms and signs of varying degree and kind. This second class is further sub-divided into: (a) partial ruptures with recurring progressive and slight hemorrhages; (b) tubal abortions; (c) cases of unruptured tubal pregnancy.

A study of all cases justifies these conclusions:

1. More than 33 per cent, of extra-uterine pregnancies occur in young primiparas.

2. Salpingitis, or pelvic infection, is not an essential or frequent causative factor.

3. Most of the cases of complete rupture with alarming hemorrhage occur in the early weeks; these are the cases that are rapidly fatal unless operated on. Cases that have gone two months or more are those that furnish the greatest number of non-emergency cases.

4. Cases of sudden, severe rupture, until signs of marked intra-abdominal hemorrhage are present, often simulate other grave abdominal emergencies with abdominal tenderness and spasm, high white blood count, fever and vomiting.

5. In grave emergencies with signs of extreme hemorrhage, operation should be done at once without waiting for a possible reaction.

6. In the less severe cases of tubal rupture, without signs of marked hemorrhage, a correct diagnosis is often difficult or impossible.

7. The menstrual history cannot be depended upon; many of the most alarming cases had skipped no period.

8. The character and location of the pain may vary within wide limits.

9. Tubal abortions are nearly as frequent as tubal ruptures. Cases of tubal abortion seldom give a history of skipping a menstrual period, but a history of continued slight flowing or dribbling since the last period.

Cobb believes that the following statements cover the case:

1. Immediate operation is the method of choice.

2. Delay even for transfusion is dangerous and fatal, and especially *delay with stimulation*.

3. With proper technic and use of intravenous salt solution the percentage of deaths directly due to operation will be very low.

4. In a very small percentage of cases direct transfusion will be needed and will save the small number of cases that would be fatal otherwise.

5. Direct transfusion should be done after operation, not before.

6. With the availability of infusion and direct transfusion, it is criminal for any operator of reasonable skill to delay.—*Annals of Surgery*, Dec., 1912.—*New York Medical Times*, July, 1913.

SURGICAL TREATMENT OF CANCER OF THE CERVIX UTERI.

J. L. Faure (*Arch. mensi d'obst. et de gyn.*, October, 1912) gives his results from the treatment of 250 cases of cancer of the cervix by surgical methods. He considers the operation of preference to be abdominal hysterectomy, with removal of the uterus, upper part of the vagina, and pericervical tissues, even when these appear to be normal, all in one mass. He thinks that the removal of the entire contents of the pelvis with all swollen glands is entirely unnecessary. If there are glands which are manifestly diseased these should be removed, but many swollen glands return to a normal condition after removal of the ulcerating tissues, showing that their enlargement was simply inflammatory. That the results of the operation are permanent is shown by the fact that some of these cases have remained without recurrence for from five to ten years since the operation. There is much difference in the success of this operation depending on the extent to which the disease had advanced at the time of operation. If disease involves only a portion of the cervix the prognosis is good; if the cervix is extensively diseased and the tissues about the organ infiltrated there can be no expectation of permanent good results. The author thinks that the mortality should be about 50 per cent. in these cases, including the advanced ones. In early cases cure without recurrence is the rule. Vaginal hysterectomy should be considered of less value because it gives less light on the seat of operation, which should be ample to get the best results. The hypogastrics should be ligated to lessen hemorrhage, and give better view of the field of operation. Catheterization of the ureters is not necessary. Four of the author's cases were operated on during gestation, and the operation is rendered easier by the softening of the tissues due to pregnancy. The author thinks that radium has its place in the treatment of these cases. While he does not use it before operation, believing that its use hardens the tissues and makes their separation more difficult, he does consider it of value after operation in preventing recurrence.—*American Journal of Obstetrics and Diseases of Women and Children*, April, 1913.

MYOMA OF THE CERVIX UTERI.

M. Rabinovitz (*Surg. Gyn. and Obst.*, 1912, xv., 668) has collected 133 cases of cervical myoma, representing most of the available material recorded in the literature for the past twenty-six years. An analysis of the material thus gathered leads to the following clinical deductions: The etiology of cervical as well as of corporeal myoma is, in all probability, a perverted ovarian secretion, which may be termed a "myom-hormone." This is evidenced by the fact that it occurs either in multiparæ becoming relatively sterile, or in the primarily sterile, or in the celibates, in all of whom the sexual energy, while still active, apparently finds an abnormal expression in the tumor development. The period of life most propitious for the growth of myomata is between the ages of thirty and forty-five. During this period manifestations, such as libido and menstruation, are still fairly active. This disturbance, in the relative proportion of the sexual gland functions, indicates a change in its metabolism, which suppresses fecundation, but is capable of calling forth a homologous or a heterologous tissue change and the formation of a tumor. Cervical myomata affect the posterior lip more frequently than the anterior lip. Cervical myoma is more often the cause of sterility than corporeal myoma. Abortion occurs less frequently in cervical myoma than in myoma of the body of the uterus. Dystocia is much graver and the results more serious in cervical myoma than in uterine myoma. Bladder and rectal disturbances, and neuralgic pains from pressure upon the sacral plexus, manifest themselves at an earlier period in cases of the cervical myoma than in the uterine. The diagnosis of cervical myoma offers greater difficulties than are presented by uterine myoma. The treatment of cervical myoma is radical removal, choosing the vaginal route for the intravaginal variety and the abdominal approach for the supravaginal growths.—*Amer. Jour. of Obs. and Dis. of Women and Children*, April, 1913.

TRUE MALIGNANT FIBROID (MYOSARCOMA).

Lihotski (*Zentralbl. f. Gynäk.*, August 9th, 1913) reported in January an authentic case of malignant fibroid and exhibited the tumor at a medical society in Vienna. The clinical history, he noted, gave no hint of malignancy; the patient was 41 years of age; she had borne six children. There was no excess or irregularity in the catamenia. The tumor had developed slowly, but there had recently been rapid increase in bulk, with pain and pressure symptoms, common complications in patients with innocent fibromyoma of the uterus. Lihotski operated,

and noted as soon as the tumor was exposed that it was grey in color and very friable; this R. Meyer had already found to be the usual appearance of a myosarcoma of the uterus where secondary changes in the cells were already in active progress. Hysterectomy was performed; the tumor was of the size of a man's head. Lihotski exhibited sections which showed the characters of myosarcoma distinctly. Seven months after the operation the patient showed no evidence of recurrence. Now that reliable microscopy allied to advanced knowledge of histology are available, statistics on the relative frequency of malignant fibroid are more reliable than heretofore. Yet Lihotski reminds gynaecologists that whilst recent observers make this tumor as existent in from 2 to 3 per cent. of all "fibroids of the uterus," Warnekros, working in Bumm's clinic, made the percentage as high as 10. Schottländer, discussing Lihotski's observations, distrusted Warnekros' statistics, but made out, according to his own researches in a large clinic, that the frequency of myosarcoma certainly reached 3.5 per cent.—*British Medical Journal*.

THE RADIUM TREATMENT OF CARINOMA UTERI.

The wide interest aroused by Bumm's recent lecture has in no sense abated, and Dr. v. Seuffert, Döderlein's first assistant, made the journey from Munich with the sole object of recounting his chief's further experience with the remedy since his pronouncement in the summer at the Gynaecological Congress at Halle. He reported that 152 cases of carcinoma of the uterus and cervix had received treatment. One-third of these were also treated with the x rays, and none of them were treated by radium only. The clinic in Munich also used only small doses (50 to 100mg.), which were inserted for twenty-four hours at a time. They were in complete agreement with Bumm's warning on the dangers of lead filtration. Of the 152 cases 103 were inoperable, and the increased admission of inoperable cases was undoubtedly to be dated from the time of publication of the radium treatment. The beneficent results of the rays were demonstrable in every single case, for since February of this year there had not been a single case of uterine or cervical cancer operated on in Döderlein's clinic. A large proportion of the 152 cases were still under treatment, but for the present 31 of these had been regarded as successfully treated, and had been discharged. These results were truly remarkable when it was remembered that 10 of these 31 cases had been labelled inoperable on admission. Dr. Seuffert informed his hearers that at a recent meeting of the heads of the Bavarian gynaecological clinics at Munich, Professor Döderlein

had demonstrated 24 of these 31 apparently cured cases to the satisfaction of all present; in none of them could a recurrence be established. In one remarkable case in which the primary growth had deeply involved the vaginal mucous membrane, and in which the pelvis was filled with secondary tumours, the whole mass and the vaginal ulcer had seemingly disappeared completely four weeks after the radium had been applied.—*British Medical Journal*.

THERAPEUTIC HINTS

VACCINE TREATMENT OF TYPHOID FEVER.

Watters, Boston, reports on the therapeutic use of typhoid vaccine in active typhoid fever, appending a table showing the results in 1,120 cases, 158 of which were his own, the remainder collected from various sources. His conclusions are:

1. The duration of fever in days is much less in vaccine-treated cases than in untreated.
2. The total residence before discharge is less in vaccine-treated cases than in untreated.
3. The percentage of relapses in vaccine-treated cases is only one-quarter of that in untreated cases.
4. The earlier in the progress of the disease the vaccine treatment is inaugurated the better are the results.
5. At no stage in the disease does the vaccine produce any ill-effects.
6. Dose—100-500 m. of old non-virulent culture repeated in 2 to 4 days.

PITUITARY EXTRACT IN RHEUMATIC ARTHRITIS.

Wallace and Child report the results of the use of pituitary extract of ox. in intramuscular injections in rheumatic arthritis. Their conclusions are:

1. General condition is improved.
2. Pain, swelling and movement of joints are greatly improved.
3. Blood pressure elevated throughout treatment.
4. Intestinal action was improved.

Their preparation was: 0.3 gm. desiccated fresh ox. pituitary, in 30 cc. sterile saline, to which was added 0.3 gm. chloretone. Filtered and sterilized.

Dose—1 cc. intra-muscularly under aseptic conditions.

ANTI-TYPHOID VACCINATION.

In this article Doty (New York) (*Medical Record*, Vol. 84, No. 14, Oct. 4, 1913, p. 607) criticizes the present use of anti-typhoid vaccine. While he does not actually deny the excellent result reported by the Medical Department of the U. S. A., he at least casts doubt upon them by stating there are dissenters who question the value of anti-typhoid vaccine.

His principal objection is to the manner of its use. He claims that it is being used far too freely and promiscuously, without paying any attention to other means to combat the disease. In the wide-spread use of anti-typhoid vaccine he fears that the public will relax the strict sanitary measures which have hitherto been their only means of defence. In some people, too, there are contra-indications on account of organic disease or impaired health.

He concludes his article with a plea for the continuance of sanitary measures as the sanest means of prophylaxis against typhoid, and the statement that anti-typhoid vaccine should only be used as an auxiliary measure where special means of protection are demanded.

TREATMENT OF SENILE NEURASTHENIA.

R. Oppenheim, in *Progrès médical* for April 12, 1913, states that neurasthenia in the elderly or aged is most frequently dependent upon intoxications, including autointoxications, upon arteriosclerosis, and upon renal insufficiency. It is not enough, however, to place an old arteriosclerotic or nephritic patient upon a milk diet or a salt free vegetarian diet, if the physical asthenia, mental discouragement, excessive nervous irritability, and insomnia are to be relieved. The treatment directed against the cause of the condition must be supplemented by certain special measures. Thus, the anorexia often existing with these patients should be overcome and care taken that they ingest sufficient food. If necessary, to arouse the appetite, the following mixture may be ordered:

- ℞ Tincturæ condurango ʒss (15 grammes)
 Tincturæ gentianæ ʒiiss (10 grammes)
 Tincturæ calumbæ ʒiiss (10 grammes)

M. Sig.: Twenty drops in water a quarter of an hour before each meal.

Or,

- ℞ Tincturæ condurango ℥xxx (2 grammes)
 Syrupi aurantii ʒiv (120 grammes)

M. Sig.: One tablespoonful in half a tumblerful of water before meals.

Insomnia should be overcome, if practicable, by simple measures alone, such as light evening meals, lukewarm affusions or hot partial baths (avoiding full baths in arteriosclerotics especially). If such means fail, some of the least harmful sedative drugs will have to be tried, e.g.:

- ℞ Zinci oxidi gr. $\frac{3}{4}$ (0.05 gramme)
 Valerianæ gr $\frac{3}{4}$ (0.05 gramme)
 Extracti hyoscyami gr $\frac{3}{4}$ (0.05 gramme)

Ft. in pilulam No. i.

Sig.: One pill before supper and another two hours after.

Once or twice weekly, a cachet containing trional and perhaps heroine hydrochloride may be substituted for the second pill in the evening.

Nerve tonics should be used to combat the patient's general asthenia. Lecithin in doses of one and a half to seven and a half grains (0.1 to 0.5 gramme), either in pills or in granulated form, may be administered; or, injections of oil containing lecithin may be given:

- ℞ Lecithini ʒss (2 grammes)
 Olei olivæ (washed with alcohol and sterilized) ʒx (40 grammes)

Ft. in ampullas No. xx.

Sig.: Contents of one ampule to be injected every day.—*New York Medical Journal*.

TREATMENT OF CHOREA.

R. Oppenheim, in (*Progrès médical* for March 22, 1913), states that in mild forms of chorea the use of arsenic is unnecessary. Careful supervision of the diet, an increase in the period spent in bed to fourteen or sixteen hours, attention to the regularity of the bowel movements, and the giving of a general wash with hot water each morning, followed by dry rubbing, are among the measures indicated. Twice daily give a tablespoonful of the following mixture:

R	Antopyrinæ	ʒiiss	(10 grammes)
	Tincturæ belladonnæ foliorum	ʒxl	(2.25 grammes)
	Syrupi aurantii florum	ʒii	(60 grammes)
	Aquæ destillatæ, q. s. ad.	ʒv	(150 grammes)

Misce.

In very severe cases of chorea, the child should be kept isolated and in a bed surrounded by padded boards. Arsenical treatment should be given, and likewise antipyrine in doses larger than in the quoted formula. If the antipyrine does not prove effective in a few days, chloral hydrate in full doses should be given:

R	Chlorali hydratis	ʒss-1	(2-4 grammes)
	Patassii bromidi	3¼-ss	(1-2 grammes)
	Codeinæ sulphatis	gr. 2-3	(0.04 gramme)
	Syrupi	ʒv	(20 grammes)
	Aquæ destillatæ, q. s. ad.	ʒiiiiss	(110 grammes)

M. Sig.; To be taken within twenty-four hours in tablespoonful doses.

Where infectious phenomena or cardiac complications accompany chorea, sodium salicylate in daily doses of from thirty to sixty grains (two to four grammes) should be added to these measures.—*New York Medical Journal*.

DECREASE OF TUBERCULOSIS IN PRUSSIA.

In a recent issue of the *Zeitschrift für Tuberculose*, Dr. M. B. Franckel has presented statistics showing the decrease of tuberculosis in Prussia during recent years. In 1876 the total urban mortality in that country was 27.6 per 1,000, and the rural mortality 24.6. The urban mortality from tuberculosis in the same year was 3.6, and the rural 2.8. In 1909, the total urban mortality in Prussia was only 19.0, the rural was also 18.0; and the tuberculosis mortality figures were 1.8 and 1.3 respectively. In other words, the general death-rate of Prussia fell one-third in 33 years, and the tuberculosis death-rate one-half.—*Boston Medical and Surgical Journal*.

TREATMENT OF CARDIAC DISTURBANCES IN CHRONIC DYSPEPSIA.

R. Oppenheim, in *Progrès médical* for March 15, 1913, discussing the treatment of complaints such as palpitation, intermittences, tachycardia, bradycardia, pseudo anginal attacks, etc., advises, in the first place, strict dieting according to the form of digestive disturbance pres-

ent, the reduction of starchy foods to a minimum, and the taking of a light evening meal. Constipation must be prevented. If necessary, a teaspoonful of the following preparation may be taken in a little water at bedtime:

℞ Fluidextracti frangulæ ʒvii (25 grammes)
 Fluidextracti rhamni purshianæ ʒvii (25 grammes)
 Glycerini ʒx (40 grammes)

Misce.

A cool moist compress, covered with some impervious material, may be left upon the epigastric and precordial regions overnight; or, a compress moistened with alcohol may be applied morning and evening for half an hour. One of the following pills should be taken at night:

℞ Extracti hyoscyami gr. 4-5 (0.05 gramme)
 Fluidextracti valerianæ gr. 4-5 (0.05 gramme)
 Zinci oxidi gr. 4-5 (0.05 gramme)

Fiat pilula No. i.

When cardiac discomfort appears, the following ointment, recommended by Robin, should be lightly rubbed over the precordium:

℞ Veratrinæ gr. iiss (0.15 gramme)
 Extracti opii gr. xii (0.75 gramme)
 Olei trebinthinæ rectificati ʒss (2 grammes)
 Olei menthæ piperitæ gtt. xii
 Adipis lanæ hydrosi ʒi (30 grammes)

Misce. Fiat unguentum.

The patient should then take every hour, until the attack ceases, a tablespoonful of a sedative preparation:

℞ Potassium bromide ʒiiss (6 grammes)
 Cherry-laurel water ʒiiss (6 grammes)
 Syrup of ether ʒi (30 grammes)
 Valerian distillate ʒiiiiss (110 grammes)

Mix and make into a solution.

The syrup of ether contains two per cent. of ether and five per cent. of alcohol; the valerian distillate is made by macerating one part of valerian with eight parts of water for twelve hours, distilling, evaporating to four parts, and filtering.—*New York Med. Journal.*

TREATMENT OF FISSURED HANDS.

Brocq, in *Nouveaux remèdes* for June 8, 1913, is credited with the following combination, a few drops of which are to be well rubbed over the hands morning and evening:

- ℞ Aqua rosæ ℥iiss (100 grammes)
 Glycerini neutralis ℥i (30 grammes)
 Acidi tannici gr. viiss (0.5 gramme)
 Misce.

Before retiring there should be applied to the affected parts either pure hydrous wool fat or one of the following preparations:

I.

- ℞ Vanillini gr. viiss 0.5 gramme)
 Olei rosæ gtt. i
 Adipis lanæ dhydrosoi gr. lxxv (5 grammes)
 M. Ft. unguentum.

II.

- ℞ Mentholis gr. xxii (1.5 grammes)
 Phenylis salicylatis gr. xxx (2 grammes)
 Olei olivæ ℥iiss (10 grammes)
 Adipis lanæ hydrosoi ℥iiss (50 grammes)
 M. Ft. unguentum.

—*New York Med. Journal.*

TUBERCULOUS ULCERATIONS.

Every five days cauterise the surface with:

- Nitrate of Silver 15 grs.
 Distilled water 1 dr.

Touch the parts once a day with:

- Lactic acid 1 oz.
 Water 2 oz.

Dress with iodoform and destroy, when necessary, the peripheric nodulae with the thermo cautery.—*Medical Press*

TREATMENT OF RHEUMATISM.

- ℞ Salicylic acid 15 grs.
 Antipyrine 1 dr.
 Bromide of potassium 1 dr.
 Ext. of belladonna 6 grs.
 Ext. of opium 5 grs.
 Essence of Turpentine 1 dr.
 Vaseline 1 oz.
 Lanoline 1 oz.

Rub into the inflamed joint, apply a layer of cotton wool, and cover with oil silk.—*Medical Press*

PERSONAL AND NEWS ITEMS

Ontario.

Mr. T. A. Woods is seeking to restrain the town of Oakville from emptying its sewage into the lake, as he contends it creates a nuisance at his summer home, and lowers property values. In the event of not being able to restrain the town, he seeks damages for depreciation of property.

Controller McCarthy has been appointed by the Board of Control of Toronto as the city's representative on the Board of St. Michael's Hospital, and Controller O'Neill on the Board of the Western Hospital.

Mrs. Sarah A. Thompson, of Hamilton, has left the following bequests: \$10,000 to the Mountain Sanitorium, \$5,000 to the Salvation Army Rescue, \$5,000 to the Girls' Home, George Street; \$5,000 to the Home of the Friendless and Infants' Home, Caroline Street South; \$10,000 to St. Peter's Infirmary, \$5,000 to the Babies' Dispensary Guild, \$1,000 to the Travellers' Aid, Y.W.C.A.; \$10,000 towards the enlargement of Aged Women's Home, \$5,000 to the same institution to provide maintenance for old ladies who are unable to pay for admittance.

On 30th January the Medical Health Officer of Niagara Falls closed the International bridge to unvaccinated persons living on either side and crossing to the other to work. Dr. H. H. Logan said he had taken this action to prevent the spread of smallpox to the city, as 125 cases of disease were reported on the American side of the border.

The Alexandria and Marine Hospital will ask the town of Goderich to grant \$15,000 to fit up and equip and enlarge the building on the Cameron property, which has been acquired for a new hospital. If the money is voted by the people the trustees will take over the property and go on with improvements.

The Women's College Hospital of Toronto is to become an incorporated institution. Those interesting themselves in this movement are Mesdames Rutherford, Fisher, Torrington, Anderson and Clarke.

There were 320 violent deaths in Toronto last year, and on these 255 inquests were held. It is estimated that \$136 has to be paid by the friends, the city and the province for every case where the chief coroner is notified, before a burial certificate is given.

A short time ago the Gas Company contaminated the water supply of a large section of the eastern portion of the city by running water from the bay into the water main.

Dr. Wodehouse, of Fort William, was most energetic in his efforts to control the outbreak of smallpox which occurred at Fort Frances.

The Hamilton city council recently passed by-laws for \$25,000 for hospital improvements, and \$100,000 for the Mountain Sanitorium. The total disbursements for 1913 by the city hospital amounted to \$125,507, and the income to \$113,791, leaving a deficit of \$11,716.

In the early days of February there was a case of smallpox in Allanburg, Welland county.

His Royal Highness, Duke of Connaught, Governor-General, paid a visit a few weeks ago to the new Toronto General Hospital. He entered into conversation with a number of patients. He said it was the finest hospital he had ever visited.

Mr. W. J. Gage recently gave \$100,000 to the National Sanitarium Association for the control of tuberculosis. This brings Mr. Gage's contributions to this work up to \$250,000.

The house of Mrs. Fenton, widow of the late Dr. Fred Fenton, of Toronto, was recently entered by a burglar. She grappled the intruder and forced him into a room, but he managed to make his escape. In the meantime her calls for help were heard and the burglar was captured by a number of citizens. Mrs. Fenton was struck several times about the head, but escaped serious injury.

The estimates for the Health Department of Toronto amount to \$273,000 this year. A grant of \$10,000 was asked for the infant mortality campaign.

Mr. John C. Eaton has given the Toronto General Hospital a specially built Russell motor ambulance. It contains the latest devices for the comfort of patients and first aid relief. It will carry two patients and four attendants.

At a recent date there were 474 patients in the Sanatoria for Consumptives at Muskoka and Weston; and of these 328 were unable pay anything for their maintenance.

The hospital at New Liskeard is much in need of money, and a deputation waited on Hon. W. J. Hanna asking for aid. The impression gathered was favorable.

The city council for Hamilton has decided to issue debentures for \$200,000, with which to commence work on the Mountain Hospital.

The new Strathroy Hospital was opened on 9th February. The institution cost \$15,000 to build, and most of the money was raised by contributions. Mrs. Inch gave \$10,000. The balance was given by Mr. T. M. Dunn. Miss Margaret Galbraith is superintendent.

The Hebrews of Toronto have procured a site and building on Murray Street for a hospital. It contains 18 rooms and is to be fitted up for the reception of patients.

A hospital is to be built at Chapleau, and will have a dispensary in connection with it.

The city of Peterboro has appointed a graduate nurse to inspect the public school children.

Mr. Justice Lennox quashed the by-law of the Ottawa City Council for the expenditure of \$13,000,000. He said that the by-law was illegal. There was no doubt as to the need for pure water, but that the council must submit the question to the ratepayers or obtain power from the Legislature to raise the money. In 1912 Mr. Hazen made a report on the condition of the Ottawa water supply and the number of cases of typhoid fever. The conditions at Ottawa are such as to justify the people in going on with a proper water system.

Mr. C. B. Somerville has promised \$100,000 to the endowment fund for the Western University, London. It is expected that the Ontario Legislature will give \$100,000, and that citizens and friends of the university will raise the sum to \$500,000.

Quebec.

Premier Asquith has granted a pension of £50 to the widow of the late Professor Alcock, who held the chair of physiology in McGill. Donations to the amount of \$360 have been received from friends, including in the list: Drs. Adami, Armstrong, Shepherd, Willey, Bazin, Birkett, Blackader, Macphail, Peterson, Hamilton, McCrae, Hardisty, Hutchison, Archibald, Miller, Abbott and MacCordick.

The annual dinner of the Medical Society of Quebec took place at the Kent House, Chutes Montmorency. The affair was a very successful one, and many medical men of distinction graced the occasion.

Hon. John Sharples, a Quebec lumber merchant, left in his will to two asylums \$45,000, and to hospitals \$40,000.

Dr. Paquin has been appointed Chief Medical Health Officer for the city of Quebec, at a salary of \$2,000 a year, and Dr. Gosselin has been chosen as his assistant at \$1,200. Dr. Cotellier is consulting physician to the Health Department at a salary of \$2,000.

Dr. Louis Laberge has resigned the position of Medical Health Officer of Montreal, and his place has been taken by Dr. S. Bucher.

It has been decided to build the Quebec Hospital on a site owned by the Grey Nuns. The building will cost \$75,000.

The Royal Victoria Hospital, Montreal, will receive \$500,000 under the terms of the will of Lord Strathcona, and hospitals in the British Isles will receive \$90,000.

Maritime Provinces.

The following appointments to the staff of the Nova Scotia Hospital have been made by the Provincial Government of Nova Scotia: Dr. W. H. Hattie has resigned from the position of medical superintendent of the institution to accept the position of Provincial Health Officer for Nova Scotia, and will be succeeded by Dr. F. E. Lawlor, who has been connected with the hospital for over twelve years. Dr. R. L. Murray has been appointed assistant medical superintendent, and Dr. E. F. Moore, assistant physician.

Dr. G. V. Hogan has been appointed professor of surgery in the University of Dalhousie, Halifax, in place of Dr. N. E. MacKay, who resigned.

Western Provinces.

Hon. Dr. Montague, Minister of Public Works in the Manitoba Cabinet, has been in poor health for some time. It is feared he may have to resign his portfolio.

Portage la Prairie has instituted medical inspection of the school children. Drs. Walker and Rennie have charge of the work.

Winnipeg has increased its grant to Grace Hospital from \$1,500 to \$2,000.

The hospital at Macleod has decided when patients are found to be able to pay that they must give notes falling due within one month, and those who are alcoholics must pay in advance.

The small hospital at Kerrobert, Sask., built by Drs. Neville and Sterling, is to be reopened for public use.

The following have passed the British Columbia examinations for the College of Physicians and Surgeons: T. H. Agnew, H. L. Bryce, A. J. Brown, J. Christie, G. E. Darby, O. E. Finch, A. R. Gilchrist, H. Grey, W. R. Haight, G. Jefferson, R. E. Johnson, W. T. Lockhart, J. J. Mason, M. T. McEachern, J. E. Montgomery, H. H. Planche, H. H. Perry, W. L. Robinson, L. M. Rice, J. A. Smith, J. L. Telford, H. A. Watson and J. H. Wilkinson.

All persons entering British Columbia from the United States may be called upon to show a certificate of vaccination of date not longer than six months.

The medical department of the University of Manitoba, located in Winnipeg, is doing well. This year there are 61 freshmen and a total of 191 students. The college is now in its 31st year, and has had its building capacity doubled. Some important additions have been made to the staff, Dr. Alexander Gibson, late of Edinburgh, is in charge of the department of anatomy.

The British Columbia report on the medical inspection of school children shows that 37,591 were examined, that 16,744 had never been vaccinated, that 835 were the victims of malnutrition, that 1,509 had adenoids, that 5,302 had enlarged tonsils, that 1,676 suffered from defective eyesight, and 580 had poor hearing.

Dr. B. R. Mooney, of Macleod, Alta., was sued some time ago on a charge of malpractice. He operated on a patient suffering from appendicitis. The doctor failed to remove the appendix. The patient entered action for \$5,000 general damages and \$919.50 special damages. The doctor contended that the appendix could not be found on account of the adhesions, and sued for \$300 for professional services. The plaintiff was awarded \$780 special damages, and the doctor \$135 for his services. The award is to be appealed.

From Abroad.

It was argued before the Mines Committee of Congress at Washington a short time ago by expert miners and chemists that Colorado could produce enough radium to do the world. It was stated that it could be produced at a cost of \$80,000 for each gramme. They said that in a few years they could secure for the United States 200 grammes, which would be enough for its use.

The health officer of the port of New York recently reported two cases of typhus fever on the steamship *Belvedere*, belonging to the Austro-American line.

On 22nd January the Board of Health of Niagara Falls, N.Y., issued an order closing all the theatres. There were at that date 79 houses under quarantine and 29 patients in the smallpox hospital.

The Wisconsin eugenics law, which provides for the issuance of marriage licenses only upon a certificate of a clean bill of health, was declared unconstitutional on 20th January by Judge E. C. Eschweiler, of the Circuit Court.

Dr. Consiglio, an Italian army surgeon, has published an article showing that those who had been criminals of some sort proved cowards in the army during the recent campaign in Tripoli.

Dr. W. H. Fitzgerald, of Hartford, Conn., has located many points within the mouth, pharynx and nose on which if pressure be made, certain parts of the body are anæsthetized. He contends that in this way all parts of the body can be brought under control, and operations performed without pain. He gave a demonstration a short time ago before a body of physicians.

Dr. Joseph Fischer, of Berlin, Germany, announces that an injection of atropin will prevent and cure sea-sickness. He claims that this treatment is successful in the severest cases.

Prof. Paul Ehrlich said a few days ago while in Paris that he was convinced that the next ten years will see immense progress in the treatment of contagious diseases by radium and the X-rays, which are still imperfectly investigated. Perhaps cancer will be conquered. The new discoveries will be along the lines of chemico-radiotherapy. Vaccines and prophylactic serums, had, he thought, yielded all that there is to be obtained from them.

In the village of Dronfield, in Derbyshire, England, Miss Outram, the teacher, has raised a violent storm of opposition by giving some instructions on sex hygiene to a class of girls old enough to leave school. Her resignation has been demanded, but the board will not accede to this.

The organized opposition to the British Insurance Act by the doctors has practically ceased. It is stated that under the Act the incomes of the doctors in poor districts has gone up from four to six times what they formerly were. Many of these doctors are now making £1,000 a year.

One of the latest "cures" comes from Cincinnati. It is that of swabbing the throats of schoolboys with a solution of nitrate of silver as a cure for cigarette smoking. The Chief Health Officer has tried this treatment rather extensively.

There is a bill before the New York Legislature empowering bodies that grant licenses to doctors, druggists, dentists and veterinaries, to cancel these if it is proven that their holders become addicted to the use of habit-forming drugs.

The Wisconsin eugenic law has been declared invalid. It permitted the surgical sterilization of degenerates. It has been held that such a law cannot be enforced, the United States constitution forbidding such.

A memorial tablet was unveiled at University College, London, recently, in memory of Lord Lister.

On January 23, the appellate division of the Supreme Court, U.S., handed down a decision affirming the recent conviction of a citizen for violation of the compulsory education law in refusing to have his son vaccinated. This decision is of importance as a precedent in declaring the legality of compulsory vaccination.

To encourage the raising of children in France, it is proposed to exempt from taxation all families of more than four, and to give each married voter an additional vote for his wife and for each minor child.

Report from Chicago states that the number of suicides in the United States in 1913 was 13,106, as against 12,981 in 1912. Of the suicides in 1913, 8,602 were males and 4,504 females. Among professional men, the largest number of suicides was 34, among physicians.

Justice Potter, of the Supreme Court of Pennsylvania, recently handed down a decision affirming an order of the Common Pleas Court of Pittsburg, denying a charter to an organization known as the Chiropractors' Association of Pennsylvania. The refusal of the charter was based on the ground that the applicant had no legal status under the Medical Practice Act.

The mortality statistics of France for 1911, published this month in Paris, show a total of 775,088 deaths, as against 704,770 in 1910. Of these, 86,113 were caused by tuberculosis, 31,768 by cancer (as against 27,306 from the same cause in 1906), and 29,470 by the epidemic infections. In Paris in 1911 the tuberculosis death-rate was 380 per 100,000.

During the mental illness of George III. in 1801 there appeared the well-known epigram:

The King receives three doctors daily—
Willis, Heberden, and Baillie;
Three distinguished clever men—
Baillie, Willis, Heberden;
Doubtful which more sure to kill is
Baillie, Heberden, or Willis.

It is announced in *Science* that the Cleveland (Ohio) City Hospital is to become affiliated with the medical school of Western Reserve Hospital. The sum of \$1,000,000 has recently been raised for the further endowment of the school.

A gift of \$750,000 was made on January 22nd by the General Education Board toward the fund of \$1,500,000 to be raised by the Medical Department of Washington University, St. Louis, Mo. The specific purpose of the money given is to create full time teaching and research departments in medicine, surgery and pediatrics.

In connection with the resolution introduced in the New York Board of Aldermen on Tuesday, January 20th, making it a misdemeanor to insert in newspapers, circulars, or handbills any advertisement which contains a mis-statement of fact or is misleading or deceptive in any way, attention is called to the work the Department of Health of the city of New York is doing in order to combat the methods of the advertising medical quack.

The new building in Westmoreland Street, London, W., for the National Hospital for Diseases of the Heart, formerly in Soho Square, was opened on January 12th, by H.R.H. Prince Arthur of Connaught.

Statistics recently published in London show the relative rates of

increase in population of the various countries of Europe in 1911. The six nations having the most rapid growth are Bulgaria, Roumania, Russia, Portugal, Serbia and Bosnia. Germany stands eleventh, with an increase of 113 per 10,000 of population. In Scotland the rate was 105, in England 98, Austria 95, Belgium 85, Switzerland 84, Spain 81, Ireland 67, and France 9. The rate of increase in Bulgaria was 188.

Dr. Christian R. Holmes was installed as Dean of the Medical College of the University of Cincinnati, Ohio, on January 16. Addresses were made by President Dabney of the University, and by Dr. William H. Welch, of the Johns Hopkins Medical School.

A commission has been appointed in Britain to inquire into the question of venereal diseases, their prevalence, and the injury they cause to public health. The members of the commission are: Lord Sydenham (chairman), Sir Daniel B. Jones, K.C., M.P., Sir Kenelm E. Digby, Sir Almeric Fitzroy, Sir Malcolm Morris, Sir John Collie, Mr. James E. Lane, Dr. Arthur Newsholme, Canon J. W. Horsley, Rev. J. S. Ledgett, Dr. F. W. Mott, Mr. Philip Snowden, Mrs. Scharlieb, Rev. Mrs. Creighton and Mrs. Budgwin. There is here much talent, and their report will be looked for with interest.

The vital statistics for Britain show that the annual death rate in English and Welsh town population was 13.9; in the town population of Scotland it was 14.7, while in Ireland it was 17.2.

OBITUARY

THOMAS JAMES MOHER.

Dr. Moher, superintendent of the Hospital for the Insane, Cobourg, for the last three years, died on 25th February at Cobourg, aged 52 years. He was formerly medical superintendent of the Asylum at Brockville, having served there for six years, and was also connected with the similar institution at Orillia.

For some time the late Dr. Moher was in general practice at Trenton and at Peterboro, where he was born in 1862, and where his remains were taken for interment. Deceased leaves a widow and one son.

C. L. SMITH.

Dr. C. L. Smith, of Medicine Hat, Alta., died a short time ago. He was well known in that part of the country. He took an active interest in all public questions, and was surgeon to a section of the C. P. R. He leaves a widow and two children.

E. J. BERNARD.

Dr. Bernard, of Pointe St. Charles, Montreal, died on 2nd December. He was in his thirty-third year, and unmarried.

BOOK REVIEWS

A TEXT-BOOK OF THE PRACTICE OF MEDICINE.

A Text-book of the Practice of Medicine. By James M. Anders, M.D., LL.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eleventh edition, thoroughly revised. Octavo of 1,335 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1913. Cloth, \$5.50 netfi half morocco, \$7.00 net. J. F. Hartz Company, Toronto, Canadian agents.

Dr. Anders' work on the practice of medicine requires no words of commendation. On the law of the survival of the fittest, it has long ago proven its right to a place in the doctor's library. It is a real pleasure to review this volume, containing so much useful information, and almost entirely free from typographical errors. The author is a practising physician of large experience, and of extensive reading. Throughout the volume there is constant evidence of the familiarity with the best literature on each subject discussed. One might search far and wide and fail to find a more suitable one-volume treatise on the practice of medicine. We most cordially recommend this work.

SCROFULOSIS.

By Prof. Dr. G. Cornet, Berlin and Reichenhall. Translated from the second German edition by J. E. Bullock, M.D., Assistant Medical Officer, the Eversfield Chest Hospital, St. Leonards-on-Sea. London: John Bale, Sons and Danielsson, Oxford House, 83-91 Great Titchfield Street, Oxford Street, W. 1914. Price, 15s net.

This splendid work throws a vast amount of light upon the subject of scrofulosis. The author discusses the various views that have been put forward regarding scrofula. He examines the opinions that it is the same as tuberculosis, or a separate condition, rather than disease.

He agrees with neither view, but concludes that there is a condition that must be regarded as the scrofulous diathesis, and that such persons may become infected with the tubercle bacillus, and give rise to scrofulo-tuberculosis; or they may be infected by other germs, and give rise to those cases of glandular disease and suppuration where the organism is some form of pus-producing bacteria. In a lucid and able manner the author develops this view in the section of the book devoted to etiology. No one can read this volume without arriving at a much clearer opinion of both tuberculosis and scrofulosis. The book is worthy of a wide circulation.

THE INTERVERTEBRAL FORAMEN.

By Harold Swanberg, Member of the Association for the Advancement of Sciences, with an introductory note by Harris E. Santee, A.M., M.D., Ph.D. Illustrated with 16 full-page plates on superfine paper. Chicago Scientific Publishing Company, Grace and Osgood Sts., Chicago. Price, \$3.00.

This book is absolutely unique. It is the first and only scientific work on this subject. It contains an atlas and histologic description of the intervertebral foramen and adjacent parts with special reference to the relations of the nervous structures.

During the past quarter of a century a great deal of attention has been directed to the spinal column from a therapeutical standpoint. Many systems have arisen claiming that the great majority of diseases have their origin from various spinal abnormalities, which result in producing pressure, or other phenomena, to the nerves in the intervertebral foramina. It is not the purpose of this book to discuss the pathologic conditions which take place to the nerves or the intervertebral foramina, but to present a clear and concise description of the normal histologic structure of this part, with special reference to the relations of the nervous structures. Once the normal structure is mastered, the reader will then be in a better position to judge for himself the effect of pathologic changes to these parts.

Plates are shown in the spinal canal, intervertebral foramen and external to the intervertebral foramen, and show the following nervous structures; anterior and posterior roots, spinal ganglion on posterior root, spinal nerve, anterior and posterior primary divisions of the spinal nerve, and the white and grey rami communicantes of the sympathetic. The size of the spinal nerve in proportion to the intervertebral foramen is clearly shown. The relations of the various parts of the spinal nerve and sympathetic fibres to bone, fibrous tissue, fat, muscle, and blood vessels are easily seen and thoroughly explained. Every effort has been made to give the reader a clear and concise idea of the normal structure and situation of these parts.

This work contains no theories. One can see these parts just as they normally are. You can then formulate your own opinion about nerve pressure, impingement, irritation, etc., as a cause of disease. It is a work every progressive physician should have.

To the careful perusal of anatomists everywhere we have pleasure in introducing this work.

MATERIA MEDICA, PHARMACOLOGY, THERAPEUTICS AND PRESCRIPTION WRITING.

Materia Medica, Pharmacology, Therapeutics and Prescription Writing. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D., Associate in Pharmacology and Therapeutics at Columbia University. Octavo of 602 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$3.50 net. Toronto: J. F. Hartz Company, Canadian agents.

The author announces that this work is the adaptation of his lectures to his students at Columbia University. He has, however, nothing to apologize for, as the book is certain to give satisfaction to those who consult its pages. The first portion of the book is devoted to general principles, and the second to individual remedies, the preparations, pharmacology and uses of the various drugs are given in a concise and accurate manner. The study of this work will prove a useful and safe guide to all who make use of it. It is especially well adapted for students whose time is somewhat limited, but who require the best in moderate compass.

ANATOMY AND PHYSIOLOGY.

Anatomy and Physiology. A Text-book for Nurses. By John Forsyth Little, M.D., Assistant Demonstrator of Anatomy, Jefferson Medical College, Philadelphia. Illustrated with 149 engravings and 4 plates. Philadelphia and New York: Lea & Febiger. Price, \$1.75.

We have examined many books on this subject, and feel constrained to speak of this one as about as perfect as a book can be made for any given purpose. Nothing could be done for nurses that would be of greater service than that this book should be made a universal text-book for them. It is complete, compact, clear, well illustrated and sound in every detail.

DORLAND'S AMERICAN POCKET MEDICAL DICTIONARY.

Dorland's American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, M.D., editor "American Illustrated Medical Dictionary." Eighth edition, revised and enlarged. 32 mo. of 677 pages. Philadelphia and London: W. B. Saunders Company, 1913. Flexible leather, gold edges, \$1.00 net; thumb index, \$1.25 net. J. F. Hartz, Toronto, Canadian agents.

Edition after edition of this beautiful little volume is called for.

It must also be as useful as it is handsome, or it would not be so popular. It fills a place, and does it well. This is one of the most reliable of books. The spelling, definitions, tables and pronunciation are all that the most exacting could demand. No matter what other dictionaries one may have, he should have such a pocket dictionary as this for ready use. This edition is sure to add to the long list of friends that former editions have made.

HOME NURSING.

The Home Nurse. By E. B. Lowry, M.D., author of "Herself," "Confidence," "Truths," etc. Chicago: Forbes and Company. Price, \$1.00.

Dr. E. B. Lowry, the popular writer on health topics, has brought out another very useful book, entitled, "The Home Nurse." It gives helpful directions for the care of the sick in the home and tells how to co-operate with the physician in providing for the comfort and cure of invalids. Full directions for first aid to the injured are also given. Technical terms are avoided and a complete index makes it possible to refer quickly to the desired information.

So much depends upon nursing for the successful treatment of any illness that every family should have this practical, sensible volume on their bookshelf for ready reference; it would prove as useful and indispensable as the staple remedies kept in every family medicine chest.

The writer is an authority on nursing and lectures on the subject in one of the leading medical colleges. The instructions may therefore be depended upon as conforming with the best medical knowledge and practice. Physicians will welcome the circulation of this excellent book; for it will facilitate their efforts in bringing a patient through to health, it is a veritable doctor's assistant.

KANAVEL ON INFECTIONS OF THE HAND.

Infections of the Hand. A Guide to the Surgical Treatment of Acute and Chronic Suppurative Processes in the Fingers, Hand and Forearm. By Allen B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern University Medical School, Chicago. New (2nd) edition, thoroughly revised. Octavo, 463 pages, with 147 illustrations. Cloth, \$3.75 net. Philadelphia and New York: Lea & Febiger, 1914.

This is undoubtedly one of the most valuable and practical books which the physician could place in his library. The frequency of in-

injuries to the hand, the disastrous results which may occur, and the importance of proper treatment, are well known. Dr. Kanavel has made a special study of this field, and has obtained remarkable results; and his book is the only one in existence which covers its subject fully and exclusively. It is the result of several years' work, comprising experimental and anatomical investigations carried on in conjunction with careful clinical observation of an extensive number of cases. By the use of the measures described in this volume it has been possible, even in neglected cases, to insure a restoration to complete function in 95 per cent, of the abscesses of the fascial spaces; while in tendon-sheath infections the morbidity has been reduced fully one-half, and the usefulness of many a hand that is now lost might be preserved if every practitioner and surgeon were equipped with the information set forth by Dr. Kanavel in regard to the diagnosis of this frequent and too often under-rated lesion. The practical character of this work may be shown by the following quotation from the preface: "The chapters are so grouped that the busy practitioner can find the part dealing with his particular case quickly. Given a case in which the practitioner is in doubt, he should read the chapter upon 'Diagnosis and Treatment in General.' This will indicate the group into which his case falls, and will also direct him to the proper sections of the book where cases of that nature are treated in detail." The illustrations are large and remarkably clear and instructive.

HARE'S OFFICE AND BEDSIDE DIAGNOSIS.

Diagnosis in the Office and at the Bedside. The Use of Symptoms and Physical Signs in the Diagnosis of Diseases. By Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College of Philadelphia. New (7th) edition, thoroughly revised and rewritten. Octavo, 547 pages, with 164 engravings and 10 full-page plates. Cloth, \$4.00 net. Philadelphia and New York: Lea & Febiger, 1914.

The great practical value of this work and its appreciation by the medical profession is shown in the demand for a seventh edition. In this new issue the size of the volume has been reduced by the omission of laboratory diagnosis, and the price has been correspondingly brought down to four dollars. This places it on the same basis of cost as Hare's *Practical Therapeutics*, to which it is an admirable companion. With these two books before him, the practitioner is well equipped for the most puzzling case. He could not have more authoritative information in a form more definite or more easily accessible.

The book is exactly what its title claims—an Office and Bedside Diagnosis. It is primarily a regional study of symptoms; and it points out clearly just what the physician should look for from the moment he first sees his patient until a positive diagnosis is reached. It takes up each problem as the physician must take it up in the hospital ward, in the clinic or in actual practice, and by valuable tabulations points out, wherever possible, the differentiation between conditions which are similar. Thus it virtually eliminates the possibility of error. It is a striking example of Dr. Hare's wonderful ability to pick out what is essential, and present it in such a way that it will be of the utmost service. The excellence of the work is further enhanced by the series of admirable illustrations, and by the full index covering fifty pages, which makes any point in the book instantly available.

MISCELLANEOUS MEDICAL NEWS

LORD STRATHCONA'S GIFTS TO MCGILL.

The total of Lord Strathecona's gifts to McGill University is brought up to \$2,275,000 by the announcement of the bequest in his will. His last gift of \$880,000 is the balance of a sum of one million dollars which he promised for the extension of the higher education of women movement and of which he donated \$120,000 on account in 1890, after the Royal Victoria College for Women, affiliated to McGill, had been built by him at a cost of \$350,000. During the last 15 years Lord Strathecona has paid over regularly the interest, amounting to \$45,000 a year, upon the promised endowment fund of \$880,000, which will now be handed to the university authorities, earmarked for the Victoria College. The cheque for last year's interest was mailed to Principal Peterson only a few days before Lord Strathecona died.

While the Royal Victoria College is the only department of the university to benefit by the will, McGill was very generously treated by Lord Strathecona in his lifetime. The medical faculty received \$850,000, the pension fund \$50,000, while Strathecona Hall was made possible by his initial gift of \$25,000.

HEALTH OF ONTARIO.

The monthly statement issued by the Provincial Department of Health shows the presence of smallpox in a number of municipalities,

and an increase of 21 cases, compared with the month of January last year.

Fort Frances heads the smallpox list with 11 cases, the others being: Ottawa 9, Toronto 2, Hamilton 4, Yarmouth 9, St. Vincent 4, Rothwell 4, Walpole Island 3, Lyn 1, Frederickburg 1, London 7, Haldimand 2, Brighton 1, Rockland 3, Alfred 3, Hawkesbury 2, Hallowell 1, Innisfil 3, Charlottenburg 4, East Flamboro' 1, and Mount Forest 2.

Cases of deaths from communicable diseases reported by the local Boards of Health during January, 1914, were:

Diseases	1914		1913	
	Cases.	Deaths	Cases.	Deaths.
Smallpox	76	0	55	0
Scarlet Fever	320	3	359	14
Diphtheria	202	29	265	28
Measles	184	3	705	42
Whooping Cough	89	3	45	4
Typhoid	48	14	101	35
Tuberculosis	126	64	165	101
Infantile Paralysis	0	0	8	7
Spinal Meningitis	7	4	6	6
Total	1,151	120	1,709	237

SOME OF STRATHCONA'S BEQUESTS.

Ten thousand pounds to St. John's College, Cambridge, in addition to ten thousand pounds given in his lifetime.

Two hundred thousand pounds to Royal Victoria College, Montreal, under deduction of any payments in his lifetime, and in addition to the college buildings and site provided by him.

One hundred thousand pounds to the Royal Victoria Hospital, Montreal.

One hundred thousand pounds to Yale University, New Haven, Conn.

Five thousand pounds to Aberdeen University for a chair of agriculture.

Ten thousand pounds to Leancoil Hospital, Forres.

Two thousand pounds to Streatham Home for Incurables.

Two thousand pounds to London University College.

Two thousand pounds to Middlesex Hospital.

Twenty thousand pounds to Kingston University extension fund.

AN INTERESTING LEGAL DECISION.

A decision of great importance to the medical profession of Maryland, in fact epochal, was handed down by the Maryland Court of Appeals in the celebrated Stevenson case, in which the lower court last March had affixed damages at \$1,000 against Dr. Guy L. Hunner. Briefly, the controversy was whether a physician is responsible for the acts of his subordinates. Unfortunately, the lower court believed thus and so placed the above-mentioned damages against Dr. Hunner. The case in point is the one in which Dr. Hunner, after an exploratory incision to determine the condition present in the patient's kidney, found it tubercular and after appropriate treatment instituted drainage by means of cigarette tubes. In removing these drains the resident overlooked one, it evidently having slipped into the wound and thus lost to view as well as in the actual sense. The tract was so tardy in healing that the patient in question, a woman, prevailed upon Dr. Hunner to permit her to return to her home, where the family physician continued to supervise the dressing of the wound. After the lapse of some time while probing around in the wound, this individual discovered the lost drain, which was immediately removed, but the wound continued to drain. The patient was appraised by her physician of what he had discovered and immediately drew the conclusions that the continued state of her ill health was due to the lost drain, and as a consequence instituted suit in the amount of \$30,000. After an extended as well as remarkable trial damages were awarded in her favor to the amount of \$1,000. As Dr. Hunner believed the decision unjust, he immediately had his attorneys appeal the case. In the eyes of most of the profession, however, the ultimate outcome looked very uncertain, as Dr. Hunner had previous to the trial inadvertently written a letter to the family physician admitting that he was at fault, and regretting the unfortunate occurrence exceedingly; so the reversal of the decision by the Court of Appeals is doubly pleasant to the surgical fraternity. Naturally surgeons will breathe easier when performing operations in which pieces of gauze or drainage material of any sort might in the hurry be lost. The cost of the trial is placed upon the plaintiff, but with the reservation of a new trial, if she so desires it. It is, however, believed the decision of the higher court will end the case.

The gist of Judge Boyd's decision is as follows: A surgeon who is called merely to operate on a patient in a hospital, which he does not own or control, is not to be held responsible for any mistakes in the after-treatment of the patient, administered by the hospital staff, unless he was cognizant that such mistakes had been made. The decision can

indeed only be looked upon as epoch-making, in that it marks the recognition by the court of the passing of the old days of surgery, when many operations were performed with crude equipment and in the home of the sufferer, and the present day, when practically all operations of import are performed in a properly equipped hospital, where the procedures incident to the operation can be carried out in an orderly and aseptic fashion. Naturally the surgeons of the city look upon the decision as a sweeping victory for the surgical fraternity. It is obviously impossible for a busy operating surgeon to individually dress each and every case upon which he has operated. If such were possible it would not be well for those who come to operation later, as there would be great probability of the surgeon carrying infection to a clean case, with the possibility of a fatal outcome. Moreover, it is out of the question for a surgeon who is doing any amount of surgical work to devote any considerable amount of time to the dressing of cases, else he would accomplish little more. The *Maryland Medical Journal*, in behalf of the entire medical profession of Maryland, takes this opportunity of congratulating Dr. Hunner upon the final outcome of the trial, and only regrets that he has been given so much obnoxious advertisement and unnecessary expense and annoyance.—*Maryland Medical Journal*.

RADIUM.

To the Editor of *The Canada Lancet* :

Dear Sir,—I wish to draw attention to an editorial in the *Canadian Medical Association Journal* of February last, entitled, "The New Quackery," in which those members of the profession using radium as a remedy for certain diseases are inferentially classed with quacks.

Evidently the writer of this editorial is not conversant with modern medical literature. It is astonishing that a gentleman of the learning and ability of the editor of that journal should lend himself to the offering of a gratuitous insult to men just as sincere, just as honest and just as earnest for the advancement of medical science as most men. It is also an affront to the many practitioners who constantly refer their patients for radium treatment.

That radium has accomplished much that has been expected of it will be admitted by any fair-minded man. Has the X-rays, quinine, or mercury accomplished all that was expected of them? Yet who will deny their utility in properly selected cases?

Does the editor of the journal mean to say that such men as Professors Bumm and His, of Berlin; Professor Kronig, of Freiburg; Professor Doberlein, of Munich; Professor Riehl, of Vienna; Professor

Bayet, of Brussels, and Doctors Wickham, Degrais, Barcat, Dominici, Pasteau and Foveau de Courmelles, of Paris; Pinch, of the London Radium Institute; Knox, of the London Cancer Hospital; Sir Alfred Pearce-Gould and Sir F. Treves, of London; Dr. Dawson Turner, of Edinburgh, and in America, Dr. R. Abbé, of New York, and other acknowledged authorities on this continent, are quacks?

The editor of the journal surely must know that the men of the highest standing in the profession are referring cases for radium treatment.

Perhaps the editor refers to the publicity which has been given to radium in the public press. Surely he must have noticed the publicity given to the prevention and cure of tuberculosis, of diphtheria, of typhoid fever and other scourges of humanity.

Times have changed and it is the medical profession who have changed them by encouraging public discussion of the treatment of diseases. The public demands to know the why and wherefore in public as well as in private, and why should they not learn what is their business as well as ours? If a remedy has been found for some of the ills the flesh is heir to, what is to prevent the press, both medical and lay, from calling it by its name?

Yours truly,
AUTONITE.

REGISTRATION OF PHYSICIANS.

M. L. H.

The effect of the registration requirements of the different Provinces on the legal status of physicians often comes up, and the case of *Ryan vs. McNichol*, decided by the New Brunswick courts, settled an interesting point under the law of that Province. (1 N. B. Equity 487; 34 N. B. R. 391).

The New Brunswick Medical Act provides that no person shall practise medicine in the Province unless he is registered as required by the Act, and that no person shall be entitled to recover any charges for medical services "unless he shall prove upon the trial that he is registered under the Act."

In the case of *Tozer vs. McIntosh*, the New Brunswick Supreme Court decided that a physician in order to recover for professional services must prove that he was registered under the Medical Act at the time the services were performed, and that proof of registration at the time of the trial is insufficient. (39 N. B. R. 550).

In the Ryan case, Ryan, a practising physician at Sussex, leased his premises to McNichol, another physician, for two years, (during which time Ryan agreed not to practise at Sussex); and McNichol agreed, at the expiration of the lease, either to purchase the property for a price agreed, or to leave Sussex and not to practise there, or within ten miles thereof, for at least ten years. At the expiration of the lease McNichol refused either to purchase or to leave Sussex and refrain from practising, and Ryan applied for an injunction to restrain him from practising or residing at Sussex according to the term of the agreement.

The court held that the agreement was not invalid as being in restraint of trade and contrary to public policy; but McNichol's chief defence was that Ryan was not registered under the New Brunswick Medical Act at the time of the agreement; that he, therefore, had no practice to sell, and that his agreement not to practise was no consideration as he was not legally competent to engage in practice.

Judge Barker decided against McNichol and over-ruled this argument on the ground that the Medical Act only applies to an action brought by a physician for fees, and not to a sale of his practice.

On appeal, Chief Justice Tuck, referring to this objection, said:

"I think that there is really nothing in this objection. It is absurd to say because the plaintiff was not registered on the very day the bargain was made he had ceased to be a medical doctor. There was nothing to prevent him being registered the next day. The plaintiff had not ceased to be a medical doctor because he had not registered. He had thereby forfeited certain rights and privileges which he would have otherwise enjoyed, and had subjected himself to penalties if he acted contrary to some of the provisions of the Act. But that did not prevent him from entering into a contract not to practise his profession in Sussex for a period of years. This objection was the one chiefly relied upon by all the defendant's counsel, but I cannot see that it has any strength."

THE STUDY OF ABNORMAL MAN.

The Right Honorable, the Minister of Justice and Attorney-General of Canada,

Ottawa, Canada.

Sir,—I beg leave to invite your attention to enclosed leaflet, which describes a general plan for the establishment of a laboratory or bureau to study the criminal, pauper and defective classes. As indicated on

page 4 of leaflet, the plan does not necessarily involve great expense. A bureau for moral health is as needful and perhaps more so than a bureau for physical health.

In recent years, public interest in such work has increased greatly, yet relatively little has been done on the *scientific* side of the subject. Most of the work being done is sociologic, and however important, does not go to the root of the matter.

For a practical beginning, the idea is to have a few young men with medical and psychological training first study the inmates (especially the young) of our penal and reformatory institutions. One of the main objects is to investigate causes of crime, and by knowledge thus gained, furnish a more rational basis for methods of reform.

That the plan of work has extensive endorsement of high character is indicated by the list of scientific, medical, legal and religious societies on page 10 of leaflet. The city and province should do such work, but this does not in the least relieve the central Government from its responsibility. I therefore trust that your Government may adopt this plan of scientific and humanitarian work.

Requesting your most careful and distinguished consideration, I have the honor to remain,

With greatest respect,

ARTHUR McDONALD.

"The Congressional," Washington, D.C., Jan. 31, 1914.

TREATMENT OF A SEVERE BURN WITH GLYCO-THYMOLINE.

"Glyco-Thymoline is fine for burns." I was called a short time ago to attend a little Polish boy, four years old, who was badly burned about the face as a result of an explosion.

He was burned so badly that his eyes were closed from the swelling and I was afraid his sight would be lost, and told the parents so.

I applied a wet compress of pure Glyco-Thymoline on absorbent cotton and returned in 24 hours. To my surprise his eyes were opened. A good deal of pus formed later, but I continued the same treatment for eight days, when he fully recovered, minus eyebrows and some hair.

No other treatment was used except a little vaseline on the lip where a scar had formed.

I neglected to state that I did not see this case until 26 hours after the accident occurred, hence the great swelling and the pus that formed later.

J. R. LYONS, M.D.,
Mount Pleasant, Ohio.

EXCITEMENT IN BERLIN OR "606."

From Berlin recently came the following despatch: The latest agitation against Dr. Ehrlich's salvarsan or "606" remedy broke open last week with a movement that the Government either forbid or restrict its use. Dr. Dreuw, medical advisor to the police, sent a letter to the Imperial health authorities to the effect that salvarsan had not proven to be what Dr. Ehrlich had claimed for it, but that on the contrary it was a dangerous remedy if it was a remedy at all.

Dr. Dreuw said that medical reports showed that there had been more than 275 deaths of persons on whom salvarsan had been used, and that a large number of patients had been paralyzed or rendered blind or deaf. He added that the University of Strassburg takes a view similar to his in regard to the so-called remedy.

Dr. Ehrlich, in reply to this letter, said that probably more than a million cases had been treated with salvarsan. He did not know the number of deaths attributed to "606," but if it was only 275, that certainly was a small percentage in view of the number of patients that had been cured.

Dr. Ehrlich added that even the deaths which have been attributed to salvarsan may have been the fault of the physician in prescribing it, in an improper manner, or of the patients by disobeying the instructions of the doctors. He declared that "if the advantages were not far greater than the disadvantages, I would not permit its use for another second."

It is the opinion in medical circles in Berlin that governmental action in the direction of prevention of the use of salvarsan is doubtful.

BONUSES PAID MOTHERS IN AUSTRALIA.

Since the Maternity Allowance Act came into force, 14 months ago, 149,229 Commonwealth mothers have drawn the £5 bonus, and the Treasury has paid out the sum of £746,145 to mark the arrival of new little Australians. In New South Wales 57,140 applications for the allowance have been made, and 56,342 of them have been approved. In Victoria 40,739 mothers out of 41,052 who applied have been granted the bonus.

TORONTO VISITED BY TWO NOTED MEDICAL MEN.

Sir William B. Leishman, F.R.C.S., M.B., C.M., R.A.M.C., Professor of Pathology at the Army Medical College, London, gave an address before the Toronto Academy of Medicine on typhoid fever inoculation. Sir W. B. Leishman has done a good deal of original research work on yellow fever and the sleeping disease.

Dr. Robert Abbé, senior surgeon to St. Luke's Hospital, New York, gave an address before the Academy on the therapeutics of radium.