The Canada Lancet

THE OLDEST MEDICAL JOURNAL IN THE DOMINION

VOL. LVI JUNE 1922 No. 10

The Canada Lancet

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

VOL. LVI JUNE, 1922 No. 10

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The Lancet Publishing Company

EXECUTIVE OFFICES, 61 COLLEGE STREET, TORONTO.

35 ST. NICHOLAS STREET, MONTREAL.
24 DEVONSHIRE STREET, W. C. L. LONDON, ENGLAND.
D. E. MacVANNEL, BUSINESS MANAGER, 61 COLLEGE ST., TORONTO.

Printed at Toronto, Ont.

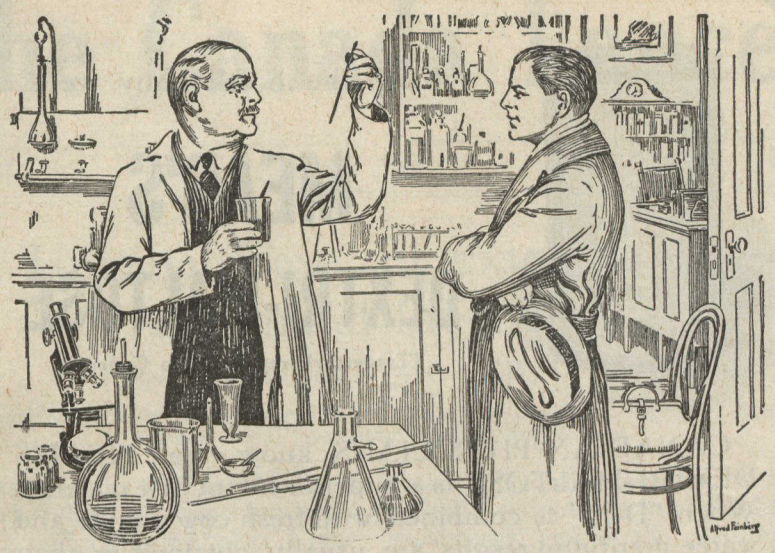
The
Canada
Lancet

Established 1867

Contributions should be addressed to

The Canada Lancet

61 COLLEGE STREET,
TORONTO.



DR. JUNIOR: *"Discovered something new, Doctor?"*

DR. SENIOR: *"New to most of us—yes. I have been confirming, by actual laboratory experiment, a statement made in Lewkowitsch's Book, Chemical Technology and Analysis of Fats and Waxes (page 245), which shows that heat is generated and practically available, in a mixture of 42 parts Water and 58 parts of c. p. Glycerine."*

DR. JUNIOR: *"Of course we know that all chemical action produces heat——"*

DR. SENIOR: *"Exactly. But many of us would think a mixture of Glycerine and Water a simple mechanical combination; never realizing that there is chemical combination also."*

DR. JUNIOR: *"Well, is the degree of heat of such amount as to be of use, therapeutically?"*

DR. SENIOR: *"Nine degrees in a few hours is something, eh?"*

DR. JUNIOR: *"Rather——yes."*

DR. SENIOR: *"Now, I understand how Antiphlogistine, which contains a large amount of c. p. Glycerine, not only retains heat but actually generates heat."*

DR. JUNIOR: *"But where is the water, Doctor? Antiphlogistine contains no water——"*

DR. SENIOR: *"That is right, but the osmotic action of the Antiphlogistine, whereby the glycerine of the application interchanges with the water of the tissues, keeps up a steady, blessed heat generation as long as the process continues—until saturation is met. Antiphlogistine, the scientific product of a scientific laboratory, is of practical, remedial application."*

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VOL. LVI. JUNE, 1922 No. 10

An Unusual Case of Extra-Peritoneal Abdominal Pregnancy

By Douglas Marshall Lindsay, M.B., Ch.B.Glasg.,

Assistant Obstetric Surgeon, Glasgow Royal Maternity Hospital; Dispensary Surgeon, Glasgow Royal Samaritan Hospital for Women.

The case which I wish to describe is one which I had the opportunity of attending and following when I was house surgeon to Dr. A. W. Russell, and to that gentleman I am deeply indebted for permission to submit it to you in detail. It is a case outstanding in my memory, not alone for its importance obstetrically, but on account of my respect for the fortitude and long suffering of the patient.

Mrs. W. was admitted to the Glasgow Royal Maternity Hospital on 10th January, 1920. At the time of admission she complained of "pains back and front," and stated that her "waters had broken" on 31st December. She was a small woman, 31 years of age, and had had five previous pregnancies, all of which had concluded naturally at term, her youngest child being 4 years of age. Her previous medical history was unimportant.

Enquiry revealed that her menstrual periods were regular and painless, lasting four days in twenty-eight, and that she had menstruated regularly and normally until 10th June, 1919. The breasts were enlarged, the nipples pigmented, and secretion could be readily expressed. The abdomen was prominent, the abdominal muscles somewhat taut, and there was a readily palpable mass of the size and consistence, and in the position of a four months' pregnant uterus. Fœtal parts or movements were not palpable, and the patient herself had not been conscious of fœtal movement. Careful auscultation failed to discover sounds of a fœtal heart. The perineum was intact, the external genitals and vaginal canal normal. There was a depression and bulging of the right and posterior fornices, while a softened non-dilated cervix was located high up behind the symphysis pubis, and rather to the left. For a week the patient was observed and, while feeling much easier, examination then (17th January) showed no alteration in the local condition.

On 21st January an examination was made under a general anæsthetic, and this suggested that the enlargement was uterine, and that that organ was bound down on the left side by adhesions, probably resulting from an old pyosalpinx. Next day a small piece of decidua was passed, but this, unfortunately, was not preserved by the nurse. The temperature up till the 21st, when the chloroform examination was made, had risen at night, but had never passed 99.5°. On that

evening, however, it rose to 100.2°. The decidua was passed, with pains on the 22nd, and on the morning of the 23rd, patient had a rigor, the temperature rising to 104°, the patient being considerably pained. On the 26th, examination revealed the fact that the cervix uteri had resumed its normal position. From this date the temperature swung badly ,and the urine became foul in odour and laden with pus. This continued despite medical treatment until 10th February, when a further examination revealed distinct fluctuation in the swelling in the right fornix. Patient at this time had no complaints whatever. On 13th February an incision was made in the convex right fornix, releasing a great quantity of most odiously smelling, brownish, pus-streaked fluid. Much green-grey membranous *débris,* fœtal skeletal parts, and decomposing fœtal soft parts were removed piecemeal with ovum forceps. A sound was passed into the uterus. In the notes of the case it is not recorded how far it entered, but my recollection is that it was just over 3 inches. Drains were inserted, and twice-daily douching was instigated. More bones were discharged, and the douches were, in part, returned *per urethram,* but no return *per cervicem* was noted. The bones consisted of the long bones complete, temporal, iliac, metatarsal, ribs, many vertebral fragments, and a heterogeneous, unrecognizable assortment of bone *débris.* Calculated from the size of the femora and humeri, the fœtus must have been between the fifth and sixth month of intra-uterine life. Dr. A. M. Kennedy, then Pathologist of the Hospital, reported that the pus contained "streptococci and coliform bacilli, also a Gram-positive bacillus showing terminal spore formation."

The operative interference, the douching, and the administration of anti-streptococcic serum seemed to benefit the patient greatly, and her temperature returned to the morning 97.5°, evening 99°, type. She had always had a little cough and expectoration, but examination of the lungs and sputum did not suggest any tubercular involvement. On 3rd February the temperature again began to mount, rising until 7th February, when it reached 102°, and falling next day to its usual level. About this time a fæcal fistula formed. On 22nd March a further operation was deemed necessary. The uretha was dilated, and more osseous remains were removed from the bladder. On 26th March patient retrogressed rapidly, and despite all efforts at stimulation, died.

From the time of her admission patient had maintained a particularly optimistic outlook, and had in every way co-operated with us for her own benefit. At various times during her residence in Hospital all hope had been given up, and the fact of her having lived so long with such a serious complication I attribute mainly to her extraordinary pluck and endurance. All the time patient never suffered really acute abdominal pain, nor was there any rigidity, tympanicity, nor, in fact, anything suggestive of intra-peritoneal involvement. Death was certified as being due to "exhaustion two days after a second operation for missed tubal abortion."

Unfortunately, permission to perform *post-mortem* operation was refused. Interesting as the intimate pathology would have proved it was unavailable, but we were at least left with a case demonstrating a series of most unusual clinical points which deserved full consideration.

The first feature of note was the

absence of a history of acute abdominal pain, even of discomfort or of hæmorrhage, which are almost invariably associated with ectopic gestation. In Hamilton Bell's article on "Early ectopic gestation at St. Thomas' Hospital,"[1] he quoted 88 cases which were all attended by pain, only three described respectively as vague pain, indefinite pain, and slight pain off and on, did not give a definite history, but in each of these cases there was vaginal hæmorrhage. I found in the literature one case of extra-peritoneal pregnancy in which there was no history of sudden pain or hæmorrhage. This was contributed by Dr. Berry Hart,[2] of the Edinburgh Royal Infirmary. He removed the completely disarticulated skeleton of a fœtus from an extra-peritoneal full-time gestation sac of five years' standing. My view is that, in that case, the very considerable lapse of time made the history of little value. In the same volume Mr. W. J. Sinclair, Victoria University, Manchester, describes a case of unruptured tubal pregnancy in which "no pain to speak of was felt." The gestation had reached six months; pains only began during the seventh month of amenorrhœa, and were attended by the passing of decidua. This case further resembled the one I have described, in that fœtal parts could not be felt. Taking the symptom of pain into full consideration, its absence in the early months suggests very definitely that in my case there was no rupture of the gestation sac.

The bulging of the fornix with the displacement of the cervix are commonly found in extra-uterine pregnancy, more particularly of the interligamentous variety, but the spontaneous correction of the cervical displacement is very unusual. It can only have resulted, as thought at the time, from the breaking down of adhesions, and it is interesting to note that it was contemporaneous with a breaking down, by the advance of a suppurative process, of the bladder wall, and was attended by pyrexia.

The formation of the vesical fistula prior to operative interference seems new. At all events, I could not find any such complication recorded in the literature at my disposal. Post-operative fistulæ were recorded. Herman[3] quoted two in a series of eleven cases of discharge or removal of septic ectopic gestations *per vaginam*. Fætal fistulæ were more common. Dr. Jane Marsh,[4] of Jodlipore, Rajputant, described one extreme case in a native woman, in which the fœtus was extruded piecemeal *per rectum*.

When one considers that the patient in my case had only eight months' amenorrhœa to the date of her operation, and that the fœtus was between the fifth and sixth month of intra-uterine development, it is surprising to find that it had degenerated to the advanced state found at operation. The process must have been very rapid. It is interesting to note that in Herman's eleven collected cases none was so advancedly decomposed, some even requiring craniotomy prior to delivery, and that, with one exception, they were cases of much longer standing. This one exception was, like our case, one of eight months' amenorrhœa, and in it fœtal bones were extruded from the vagina for over a year.[5]

The temperature chart is noteworthy, principally on the score of its uselessness as an aid to diagnosis. Until the vesical fistula developed certainly had not been suggestive of abscess formation, but from that time until the first operation it closely and very truly, pictured the condition. Its later rise synchron[illegible]

the formation of the fæcal fistula.

In conclusion, I would like to submit to you a diagnosis which is, I feel, justified if all the clinical symptoms are balanced and given full value.

This case was undoubtedly one of extra-uterine pregnancy. That it was in the broad ligament was clearly shown by the examinations and operations. The formation of vesical and fæcal fistulæ, without even a suggestion of intra-peritoneal involvement, only strengthen the opinion as to its locality.

Earlier, in dealing with the absence of pain in this case, I referred to ectopics in general, and pointed out that there was found only one, a case of five years' standing, in which there was no history of pain or hæmorrhage. It is therefore not stretching the findings to assume that there was no rupture in this case.

Tubal pregnancies, as a rule, rupture early, but I have quoted one, Sinclair's case, which had not ruptured at six months, and in 1905 Olshansen had a case of unruptured tubal pregnancy at term. But such a gestation would grow towards the abdominal cavity, and would not tend to burrow along a path of greater resistance into the broad ligament.

There is, however, a type of ectopic gestation which clinically fits all the points of this case. I refer to a pregnancy in the rudimentary horn of a bicornuate uterus. The *Journal of Obstetrics and Gynaecology* (vol. xix, p. 537) quotes Abuladse-Kiew, who say that the essential points of the diagnosis of pregnancy in the rudimentary horn of a uterus bicornis are the absence of pain and of tenderness, and the marked mobility of the tumour. Such, then, would fit it with the early history of my case. Further, it would explain the extra-peritoneal position of the sac.

Again, the fate which befel this case is not unknown in pregnancies so placed. And, finally, a peculiar point —in the *Obstetrical Transaction* of 1902 there is an unusual case reported by Dr. Herbert Williamson, of Stockton-on-Tees. No abnormal symptoms were noted throughout his patient's pregnancy, and at term weak labour pains set it. "At this there was a free discharge of what appeared to be amniotic fluid, but no membrane was passed." Laparotomy followed, and a gestation sac was found between the layers of the right broad ligament. The wall of the sac was one-third of an inch thick. This specimen was examined by a committee of the London Obstetrical Society, and the diagnosis of "pregnancy in a rudimentary uterine cornua" confirmed. "The discharge of what appeared to be amniotic fluid" corersponds remarkably to patient's history of her membrane having ruptured on 31st December.

Again let me express my thanks to Dr. Russell for his permission to deal with such an unusually interesting case. My conclusions may be entirely at fault, but, in the face of such unusual symptoms, one has to search for unusual conditions, and it is extraordinary how fully these symptoms and findings fit into the diagnosis I have suggested.

*Read at a meeting of the Glasgow Obstetrical and Gynæcological Society, held on 18th January, 1922.

The Management of Toxic Goitre with Radiation

By J. Thompson Stevens, M.D., Montclair, N.J.
Fellow of The American Rontgen Ray Soc.

The particular kind or type of goitre under discussion in this paper is also known as Graves's disease, exophthalmic goitre, hyperthryoidism and Basedow's disease. It seems to me that the term toxic goitre is the most useful since it leaves no room for imagination or doubt as to just which type or kind of goitre we refer to. This paper will be limited to a discussion of the treatment of toxic goitre, the type of goitre that poisons the patient; that produces tachycardia, muscular tremors, exophthalmos, and other symptoms, and finally kills the patient by exhaustion.

Toxic goitre has been treated medically, surgically, and, lately with increasing frequency, by radiation; each method of management having peculiar advantages over any of the other methods in properly selected cases. There are the cases for medical treatment, for surgical treatment, and for radiation. In nearly all cases a combined method is generally most important, i. e., medical and surgical methods are combined with distinct advantage, and the same is true of the medical methods and radiation. In fact, it is probably unwise to treat a patient by either radiations or surgery without the co-operation of a good internist. The disadvantages of each method might be summed up somewhat as follows: The medical treatment is likely to be continued for too long a time for the good of the patient. Nearly all patients treated medically will sooner or later be suitable for either surgical treatment or radiation. Freuenqtly operations are done upon patients in the wrong class of cases at the wrong time, either at the height of toxic symptoms or too late. The mistakes in radiology are, hit or miss methods of applying radium or the rontgen rays by technicians. Any good results obtained by them are probably accidental. Generally such treatment results in no good to the patient, or more harm than good. Simply because a man is an expert radiographer does not necessarily indicate that he is qualified to handle radiotherapeutic agents. Again the technicians are guilty of at times treating cystic and other types of goitres and really expecting results. Such methods will of course serve only one purpose, that is to prevent a large number of toxic goitres from being treated by radiation, for news of failure travels much faster than that of success. Work by the technicians has this in its favor, however, it is very cheap.

It is to be regretted that we cannot promise the patients operated upon an absolute cure. The operation is one of the most disfiguring as well as one of the most dangerous in the realms of surgery and so it seems hardly justifiable to subject so many patients to surgical treatment when the ultimate hopes of cure are questionable. Many of the patients become worse in a short time than they ever were before. The thyroid

cannot be completely removed and that portion left behind is likely and often does hypertrophy, hyperfunction soon returns and soon the patient is in about the same condition as before the operation. These patients are now commonly sent to the radiologist for help and from the large proportion of patients in these hopeless cases that are being discharged as cured, and who remain well, it is reasonable to conclude that all patients, other than the cases of the strictly medical types, ought to be thoroughly radiated before any operation is advised. If this were done at least ninety per cent. of the cases would never come up for operation. Besides the patients that have been operated upon from one to three times that are referred to the radiologist, are those that are too ill to offer any hope of an operative success. The radiologist gets some of these cases. Under careful, thorough radiation at least ninety per cent. of these patients can also be cured. Those of you who read this paper, if you believe in it, will see that cases of toxic goitre demanding operation are few. In fact about the only cases of toxic goitre demanding operation are those in which we suddenly find symptoms of suffocation due to pressure.

Another distinct advantage that radiation has over the operative method is that we can stop treatment when the patient has had enough radiation to produce a normal state of affairs. A continuation of treatment past this stage will produce the opposite condition, i. e., hypothyroidism. The surgeon cannot, of course, be absolutely sure whether he is removing too much of the gland or too little.

The basal metabolism tests of the present day, as done in the clinical laboratories, give us a reliable, scientific test a study of which will clearly show just when to stop the radiations. A good simple test is as follows: take the pulse with the patient lying down and sitting up. If the variation is greater than in a normal individual we have not yet reached the age when the radiations can be stopped with permanent results. (Pfahler.)

In about ninety per cent. of the cases there is an enlargement of hyperplasia of the thymus gland in addition to the hyperthyroidism. In radiating in a case of this kind the thymus will also have to be radiated too if we are to be successful. A röntgenogram of the chest underexposing the plate very little will show clearly the conditions in the region of the thymus gland. There are probably three types of toxic goitre, those of thymic origin, those of thyroid origin, and those of both thyroid and thymic origin.

Radiation can be administered in one of two forms or both combined, i. e., either the röntgen or radium rays can be used. The action of either agent is the same. I prefer the röntgen rays because one has at hand an unlimited supply of the rays, the treatment can be had for a comparatively small fee, and because the rays coming from a Coolidge tube backing the equivalent of 90,000 volt and filtered through six mm. of filter are not greatly different than the useful gamma ray given off by radium. Radium has the advantage that it is much easier to apply, the technic is easy as compared with the tedious röntgen technic, and it is portable, thus facilitating the treatments at home and with less shock to the patient. But as I have stated the method used matters little providing we are thoroughly acquainted

with the method we intend to use.

Personally, I would not accept a case for treatment unless I could have the co-operation of an internist. It is not at all uncommon in the severe toxic cases for the patients to be more toxic in from one week to ten days following the first series of treatments, and for this reason in these severe cases we must begin by carefully increasing the milliampere minutes gradually. This stage is fortunately followed in a short time by a complete or marked relief from the symptoms of hyperthyroidism. The tumor may decrease in size somewhat following the first series of treatments, but generally more treatment is necessary before one notices much change in the size of the growth. It is not uncommon for a goitre the size of a grape fruit to reach the size of a robin's egg in from four to five series of treatments, the patient in the meanwhile enjoying perfect health.

Röntgen Technic

Usually four fields or areas for treatment will be sufficient, crossfiring on the diseased area from each. Set the machine so that it will back up the equivalent of 90,000 volts, six mm. of filter, focal distance ten inches, and administer to each area or port of entry about seventy-five milliampere minutes, according to the value of the particular machine in use. Repeat at monthly intervals. As soon as the patient begins to gain weight, the pulse begins to slow down and become more regular, and the nervous symptoms decrease, the interval between treatments should be lengthened. Treatment can be stopped just before the metabolism tests show that conditions are normal.

Conclusions

1. Metabolism tests show that at least ninety per cent. of the toxic goitres can be cured by proper röntgen therapy.

2. Radiation properly carried out is at present the method of choice in many of the medical centres throughout the world. It does not disfigure the patient for life, it is decidedly less dangerous, and the results are at least as good if not better than those obtained by any other method. The danger just mentioned refers to high tension shock.

3. Many of the cases that are being referred for radiation are those that are too ill to withstand operations and those that have had operative failures. The results obtained in these cases only serve to prove that radiation is the best method in properly selected cases.

4. An outline of the possibilities of both surgery and radiation should be presented to each patient suffering with toxic goitre. They will generally select radiation themselves.

Diphtheria Preventive Measures

Modern civilization, with its present-day methods of living and migration, and particularly the large influx of urban populations resulting in crowded conditions in many localities, is making the prevention of exposure to infection in large cities practically, if not absolutely, impossible. In many cases, for instance, the carriers of danger are not detected and therefore cannot be avoided. They represent an unrecognized and often an unsuspected menace, in spite of vigorous efforts to avert harm to mankind. It seems likely, therefore, that, until some better plan shall have been evolved in this connection, preventive medicine and public health activities must be directed toward the securing of effective immunity to certain diseases throughout the susceptible groups in the population.

It is on such a basis that smallpox has been so well controlled in most civilized communities. Preventive vaccination is instituted in early childhood wherever sane principles of public hygiene are enforced. The dangers which may ensue from a neglect of this artificial mode of inducing immunity are now being manifested in certain districts of Great Britain where the antivaccination cult has gained some hold on the misguided populace. It now seems likely that the securing of widespread acquired immunity is to be an important aim in the prevention of diphtheria, a disease in which the carrier problem has by no means been solved. In this work the Schick test, whereby the existence of immunity or susceptibility to diphtheria can be determined with ease and precision, seems destined to play an important part.

Few, if any, organizations have had larger experience than the department of health in New York City with the application of the Schick reaction. Thousands of tests have been applied to the schoolchildren of the great metropolis. The studies of Zingher, recently reported in detail in "The Journal," indicate how life in congested districts may effect immunity. The children of the more well-to-do classes of our population show a much higher proportion of positive Schick reactions than do the children of the poorer classes. Relative segregation of the first, crowding and close contact of the second, probably account for these results. Zingher believes, in fact, that the so-called "natural immunity" depends to a large extent on contact immunity developing after repeated exposures and mild infections with the diphtheria bacillus. Zingher's studies of the reaction of racial types suggest, if they do not actually demonstrate, that the factors of race and hereditary family tendency also seem to influence considerably the development of natural immunity to diphtheria.

In the recent tests of more than 52,000 schoolchildren in New York, those who gave a positive test were injected with toxin-antitoxin mixture to secure active immunization.

In view of the fact that the problems of most effective dosage and combinations as well as the rapidity of the development of immunity and its permanence are still under discussion, the outcome of the large scale experiment in New York will be awaited eagerly by all interested in this important field of preventive medicine. The results of Zingher's Schick retests made after from two to five months indicate that it is better to wait at least six months before testing for the development of an active immunity after toxin-antitoxin injections. Two injections of toxin-antitoxin, even of a larger amount, do not give as good results as three injections of a smaller amount. The mixture should be underneutralized and yet perfectly safe for the human being. Children under 6 months of age should not be injected with toxin-antitoxin. They are generally immune (from 85 to 90 per cent.) and do not respond to these injections, as is shown when the Schick test is reapplied later. All children from 6 months to 5 years of age should be injected with toxin-antitoxin.

For the present, attention must still be directed to securing standard, dependable and easily adopted procedures of testing and immunization. If the medical profession accepts the contention that the Schick test is a reliable indication of the susceptibility to diphtheria and, further, that the currently proposed methods of toxin-antitoxin injections are effective in developing a lasting immunity, a great step in progress will have been made. Are we not prepared already to say that diphtheria preventive efforts have become directed to promising task with hope of success?

Wilde's cord (the transverse straie of the corpus callosum) are named for Sir W. R. M. Wilde (1810-1876) Irish surgeon.

MEDICAL BRIEFS

SENSORY FACTORS AND TOBACCO SMOKING

The physiologic action of tobacco has long been a subject for acrimonious discussions in which prejudice and propaganda often seriously distort the judgments of the disputants. It has taken a long time to unravel fact from fiction in the behavior of alcohol so as, for example, to demonstrate conclusively that it almost invariably acts as a depressant rather than as a true stimulant in the body. Tobacco is to-day also a popular theme for scientific and pseudo-scientific controversy. Many have wondered how the widespread habit of smoking is to be explained, and observations by Mendenhall* at the Dartmouth Medical School may throw some light on the custom. In studying the sensory thresholds of trained persons, both smokers and non-smokers, to faradic stimulation, it was noted that the effect of smoking was conditioned on the state of the sensory mechanism at the time of observation. If the person's threshold was at or near normal, smoking was not usually effective in changing it; whereas if his threshold was low, indicating high irritability or nervousness, smoking often depressed the irritability. On the other hand, if the person's sensory mechanism was in a depressed state (with a high sensory threshold), then smoking had a stimulating effect in the sense of lowering the threshold. The depressant effect of smoking was much more marked than was the stimulating tendency. Rest accomplished the same sort of restoration of the threshold for sensory stimuli to the normal, though the effect of smoking in this respect seemed to be more marked. The psychophysiologic measurements made at Dartmouth harmonize with the statements of those who experience a stimulating action of smoking when they are depressed, and a depressing effect when they feel nervous or irritable. Smokers will find in this research a justification for the belief that the use of tobacco under certain conditions may lead to such sensations or feelings as approach the normal most nearly; that is, an adjustment which brings the smoker to a physical state which is desirable because normal in its sensory features. Of alcohol it has been said that, whereas it may at times be a blessing in disease, in health it is mostly a detriment. Perhaps it will eventually appear that the smoking of tobacco also has a variety of effects, the importance of which depends on the state of the smoker quite as much as on the pharmacology of the smoke.

*Mendenhall, W. L.: Effect of Tobacco Smoking on Human Sensory Thresholds, J. Pharmacol. & Exper. Therap. 17:333 (May) 1921.

For some time the Department of the Registrar-General has been endeavoring to improve registration of births in Ontario by making appeals to physicians to issue their "Notices" in all cases.

Notwithstanding these efforts, approximately ten to fifteen per cent. of births are unregistered, and the Department has come to the conclusion that the only plan whereby these

notices can be secured is to institute legal proceedings against physicians neglecting this duty.

You are, therefore, herewith instructed to forward to this office, along with your monthly returns, a list of physicians who fail to forward the "Physician's Notice" within 48 hours after the date of the birth, giving specific instances of such neglect with names, dates, etc.

It would be advisable that you notify all physicians—through the press or otherwise—practicing in your municipality, that you are so instructed and that failure to furnish the aforenamed "Notice" will involve prosecution.

PRINCIPLES UNDERLYING TREATMENT OF HEART DISEASE BY EXERCISE

In giving exercise to a damaged heart, Theodore B. Barringer, New York (Journal A. M. A., July 2, 1921), says the end to be achieved is so to grade the exercise that the heart muscle is stimulated to contract more energetically, which increases the output per beat and at the same time richly supplies the muscle with blood, and to avoid any degree and duration of exercise which would fatigue the heart and interfere with its nutrition. The appearance of the face, the patient's sensations, the rate of respiration, the time it takes the pulse rate to return to normal, and the type of systolic blood pressure curve subsequent to work, all are of value. Barringer has found the form of systolic blood pressure curve to be the most reliable. The height of the blood pressure curve subsequent to exercise gives us an indication as to the effect of a given exercise on the heart in the majority of patients. A rise of more than 20 mms. of mercury from the pre-exercise level indicates an energetic and favorable response of the heart. A smaller rise is noted with milder exercises; and indicates a less energetic effect on the heart's contraction and nutrition. Occasionally, as the exercise is increased, the subsequent pressure reaches lower and lower levels instead of mounting higher and higher. This is accompanied, however, by evidence of overtaxing the heart, and is followed by abnormal curves of pressure. No exercises other than sitting up in bed or in a chair should be given to any patient convalescent from an attack of heart failure or recurrent endocarditis until the temperature has been normal for a week. Even after ten days of normal temperature, a recurrence of fever and heart symptoms is occasionally seen. The early exercise should be of short duration, and each series of movements should not last more than thirty seconds and should be followed by a rest. For the first three or four days the exercises should be well within the heart's capacity, and the limit of tolerance should not be approached. Exercise with dumb-bells, stair-climbing, skipping rope, running in place, hopping, and all calisthenic exercises in which the body trunk is moved widely are the ordinary forms of energetic exercise useful for heart patients. Barringer has found the most convenient form of energetic exercise to be different movements with dumb-bells varying between 1 pound and 15 pounds in weight. Swinging a bell from between the feet in an arc up above the head and repeating without a pulse; flexing the forearms alternately, with a bell in each hand, the patient sitting or standing; and pushing two bells alternately above the head are the

three most useful movements. Each close varies between five and twenty movements. After each close, the patient rests until blood pressure and pulse return to normal. The closes are repeated from five to ten times at each exercise period, which is generally once in twenty-four hours. The mild form of exercise is one which stimulates the heart's activity only moderately over longer periods of time, as shown by the small increase in blood pressure subsequent to the exercise. This form should be used for patients with small cardiac reserve power and also to supplement the first more energetic type. Walking is the best example of the milder type of exercise. This should be at first on a level. The patient should not talk and should not walk against a strong wind. A short distance should be covered at a steady gait, and then the patient should rest for two or three minutes, then repeat the walk and rest. Other forms of mild exercise suitable for heart patients are croquet-playing, setting up exercises in which the arms and legs and not the trunk are moved, and "short golf." As the patient's reserve power increases, one of the more energetic types of exercise should be added to daily regimen.

FACTORS WHICH INFLUENCE RESULTS AND MORTALITY RATE IN KIDNEY SURGERY

In summarizing the operative and postoperative complications of 263 cases, John R. Caulk, St. Louis (*Journal A. M. A.*, Sept. 10, 1921), states that hemorrhage occurred eleven times; severe in two instances, both of these resulting in death. Seven other hemorrhages occurred following nephrotomy, but were very mild, and did not cause the patient any degree of shock. Hemorrhage occurred twice during nephrectomy, first, from tearing a small, aberrant vessel at the upper pole, and the second time from the slipping of the pedicle. There has been no injury to the bowel. Shock has occurred nine times, only twice in nephrectomy. The other seven cases of shock occurred in sick children and in the very toxic individuals, most of them were suffering with pyonephrosis. In many of these individuals, Caulk believes death would have occurred if anything more had been attempted. The fact that shock has occurred but twice in 160 nephrectomies is an illustration of its rarity following clean kidney surgery. These patients almost invariably were up in the wheel chair on the tenth day. The majority of the clean cases left the hospital at the end of two weeks—very few remained in the hospital after three weeks. In classifying the diseases which compose the operative list, there were seventy-one operations for stone; of these, 20 per cent. were by nephrectomy; 25.3 per cent., nephrolithotomy; 32.4 per cent., pyelotomy, and 22.3 per cent., combined pyelotomy and nephrolithotomy. There were fifty-six operations on the tuberculous kidney; fourteen for tumor; thirty for movable kidneys with intermittent hydronephrosis; eight large hydronephroses; seventy-nine for kidney infections, that is, pyelonephritis, thirty-eight; pyonephrosis, thirty; perinephritic abscess, eleven; decapsulations, five, making a total of 263 operations. There have been five deaths in the 263 cases, a gross mortality of 1.9 per cent.; one patient died of shock following nephrectomy for tumor. The other four deaths occurred following nephrotomies: two for pyonephrosis and two

for calculus pyonephrosis and perinephritic abscesses. One is immediately struck with the high mortality in these severe infections. Out of forty-three such operations, there were four deaths, or 9.3 per cent. There was but one death (from tumor) in the remaining 220, or 0.4 per cent. operations. Of 160 nephrectomies there was but one death. In other words, the mortality occurred where the least surgery was done. This is convincing proof, in Caulk's opinion, that if renal infections were investigated earlier and such late complications not allowed, the mortality in kidney surgery should be exceedingly low.

CONTAMINATION OF THE HANDS AND OTHER OBJECTS IN THE SPREAD OF CONTAGIOUS DISEASES

As the result of a study of this subject in the Durand Hospital of the John McCormick Institute for Infectious Diseases, William J. Matousek, Chicago (*Journal A. M. A.*, May 28, 1921), reached these conclusions: The pathogenic bacteria present in the secretions of diphtheria and scarlet fever may be cultivated from the surroundings of the patients, but in the former disease less often than in the latter. Improperly sterilized eating utensils may readily serve as carriers of infectious material. The thorough washing of the hands with soap and warm running water efficiently removes the secretions with which the hands may become contaminated. To facilitate this, the skin of the hands and nails requires special care in order to insure a smooth, healthy surface and freedom from any local condition which may render thorough cleaning difficult or impossible. Gauze masks protect the facts of the nurses from gross contamination with particles of air-borne secretions. Cultures from the hands of attendants are a useful check on the individual technic of those caring for contagious diseases. Cultural studies of the surroundings of patients with contagious diseases may serve to indicate the efficiency of the technic employed, and if applied at intervals they seem to stimulate to greater efforts toward perfection.

Since the war physicians all over the world have been giving greater attention to the treatment of shell-shocked, gassed and crippled soldiers and to those civilians, both women and men, left in a nervous state by the conditions that have affected everyone on earth to a greater or less extent. Electrical treatments of various kinds have played an important part in bringing patients back to normal and in improving the condition of sufferers from nervous troubles.

In line with the trend of this treatment, the invention of Dr. Frank B. Schanne, of 244 Madison Avenue, New York City, and Dr. William S. Benson, of Newark, N.J., has simplified the treatment for nervous disorders, and is a space and money saver to the practitioner, who, instead of requiring half-a-dozen or more devices to give the various treatments required, can give all of them, serially or at the same time, by the use of the new apparatus.

The Schanne-Benson invention is known as the Electro-Magnetic Wave Bath, and incorporates in the one apparatus means of giving light, heat, electricity, and magnetism treatments. A patient can be sweated or baked, have electric light (either col-

ored or white) reflected upon the entire body, be immersed in a field of magnetism, and at the same time have the muscles of the body contracted and relaxed by a mild electric current.

The Electro-Magnetic Wave Bath takes up about the same floor space as the average couch, and will displace devices for giving Electric Light Baths, Hot Air Baths, Bergonie and Bergonie-Nagleschmidt Reducing Apparatus, Magnetic Wave Generators, Auto-Conduction and Auto-Condensation Apparatus.

Drs. Schanne and Benson have been working to perfect their invention for more than ten years, and during that time they studied the various devices that have played their part in the field of electro-therapeutics. The result of their labor and ingenuity is that it is now possible to discard the cumbersome and expensive apparatus that have been in use since the attention of medical science has been given to this field. Instead of having six different apparatus, which would require the floor space of a large room to accommodate them, the Eelectro-Magnetic Wave Bath incorporates the qualities of all six in one, and thus takes up the floor space of only one—and incidentally is priced at less than the average cost of any one of the six formerly required.

The Electro-Magnetic Wave Bath has a unique combination of modalities or units and embodies within itself the healing properties of light, heat, electricity, and magnetism and has a special device by which these modalities can be regulated to suit the strength of the strongest man or the weakness of a sick child. Patients treated in this apparatus state that instead of any sensation of electricity being applied to the body, there is a soothing exhilaration absolutely devoid of any irritation or shock.

This apparatus permits of the use of all the modalities at the same time, if the treatment calls for them. This renders it unnecessary to move a person from apparatus to apparatus, for the different treatments. They can be given simultaeounsly, not only saving the time and nervous energy of the person treated, as well as the physician, but in addition to this, giving better curative results.

The different modalities of light, heat, magnetism and electricity can be regulated to conform to the heart-beat of the person being treated. This has never been considered by the electro-therapeutic practitioner, and yet is an important feature in all such treatments, as any form of heart disease can be treated in this apparatus, not only without danger, but to the positive good of the patient.

The Electro-Magnetic Wave Bath, according to physicians who have seen it in operation and analyzed its results, is an ideal reducing apparatus. The person treated is being sweated or baked and at the same time is being given an electrical treatment that causes every muscle of the body to be contracted and relaxed in a gentle manner, which, though it is unfelt, performs the function of reducing the excess flesh and fat.

THE EXPENSIVE "POOR MAN'S MEDICINE"

A favorite argument of the nostrum exploiters, advanced when threatened with restrictive legislation or taxation, is that "patent medicines" are "the poor man's medicine." Never had a pretension a flimsier basis of fact. But a certain portion of the public can be counted on to accept as gospel any preposterous statement if only it be repeated

often enough and in sufficiently black type. The purchaser who buys a bottle of Dr. Quack's Quick Cure does not realize that about 75 cents of his dollar his been expended by Dr. Quack in an effort to convince him that he is suffering from something for which "Quick Cure" is a sure-shot remedy The most expensive thing about a "patent medicine" is the advertising. As one "patent medicine" maker said, when, in a burst of candor, he was speaking before others of his kind:

"The twenty thousand newspapers of the United States make more money from advertising the proprietary medicines than do the proprietors of the medicines themselves. . . . Of their receipts, one third to one half goes for advertising."

If, on the admission of the manufacturers, from 33 cents to 50 cents of a dollar paid for a "patent medicine" goes to the newspapers, the additional cost of exploitation in "almanacs," window displays, circulars, and other publicity features can easily be counted on to bring the amount up to 75 cents. And the farce—or tragedy—of the whole thing is that John Doe pays this 75 cents—unconsciously—for the purpose of being persuaded that he is suffering from some ailment for which the nostrum is recommended. Every physician and every druggist knows that the present "patent medicine" is unnecessary. He knows that there are already in existence official products more than ample to fill every legitimate need of self-drugging, that is, to furnish all the "home remedies" that can safely be used by the public. These official products being nonsecret, and their strength and purity being guaranteed under federal and state laws, they are in every way superior to the proprietary article of secret composition. Moreover, there being no element of monopoly or proprietorship, in the narrow sense, in the manufacture of these official products, competition may be counted on to keep the price down to a reasonable figure. The small margin of profit on the sale of official products makes it impossible for such preparations to be sold by intensive advertising methods, and their open formula makes false and fraudulent therapeutic claims unfeasible. The abolition of "patent medicine" advertising would do much to abolish the making of hypochondriacs by suggestion and would result in a great decrease in all drug taking. In addition to this large indirect financial saving there would be a direct saving in that when John Doe purchased a simple home remedy he would

pay only for the actual cost of the medicine plus a small legitimate "overhead" to cover production and distribution. It is a demonstrable fact that if the public depended on a few of the official products for their home remedies instead of on the multitudinous "patent medicines," they could save 75 cents on every dollar now expended. "Poor Man's Medicine" forsooth!—*Jour. A. M. A.*, Sept. 10, 1921.

CICERO ON OLD AGE

To those who have no recourse in themselves for living well, every age is burdensome.

Great actions are not achieved by exertions of strength, or speed, or by quick movements of bodies, but by talent and mature judgment.

We must fight against disease. Regard must be paid to health. Moderate exercise must be adopted. So much of meat and drink must be taken. Senile folly, which is commonly called dotage, belongs to weak old men, but not to all.

For, as I like a young man in whom there is something of the old, so I like an old man in whom there is something of the young.

One who always lives in these pursuits and labors for the welfare of the state does not perceive when old age steals upon him. Thus, gradually and unconsciously life declines into old age, nor is the thread suddenly broken.

If old men are peevish and fretful and passionate and unmanageable, or even covetous, these are the faults of their character and environment, not of their old age.

USE OF DRUGS IN INFANCY AND CHILDHOOD

In order to establish a standardized list of drugs essential to the treatment of the diseases of infancy and childhood, Henry F. Helmholz, Rochester, Minn., selected from the pharmacopeia a list of sixty-one drugs. This list he sent to eighty-four men who are limiting their practice to pediatrics, with the request that they check the drugs listed and add to them any drugs which they considered essential in their practice. Of the eighty-four men, sixty-four responded. Only mercury in some form and santonin, on the list submitted, are used by all sixty-four men. Besides these, silver, arsenic, iron, sodium bicarbonate, cod liver oil, and at least one representative of the opium series, the antispasmodics, heart and circulatory stimulants, hypnotics, laxatives, antipyretics, anthelmintics and urinary antiseptics, were used by sixty men of the sixty-four. One half of the men used forty-three of the drugs indicated on the list. Fourteen added milk of magnesia, and three or more added benzyl benzoate, hyoscyamin, chloroform, agar-agar, creosote, chenopodium, glycerin, and tincture benzoin compound. One man added thirty-eight drugs to the list. The drugs in this list can be readily divided into four groups. The drugs in the first group have specific indications; for example, mercury, arsenic, quinin, santonin, male fern, and so forth, act directly in destroying parasites, and the drugs such as silver, hexamethylenamin and the salicylates, have definite antiseptic powers for destroying bacteria. The indication for the use of these drugs is usually given with the diagnosis of the disease. The drugs in the second group regu-

late the function of the different organs; for example, digitalis, the group of laxatives, and the diuretics. The third group is essentially for the symptomatic treatment of disease, as morphin for the relief of pain. The fourth group consists of drugs that are used for a specific purpose, and for practically no other, such as phosphorus in the treatment of rickets and spasmophilia, mustard for counterirritation, and phenol (carbolic acid) for the infections of the middle ear. The treatment by drugs of diseases in infancy is influenced in its effectiveness by the factor of nutrition and growth. This is perhaps best expressed by the statement that as long as a child eats and digests well there is a good chance for recovery. A drug which acts favorably on the disease focus but interferes with the nutrition of the child is harmful. The effect of the so-called tonic treatment during the active stage of disease is another example of the failure to recognize the nutritional factor in disease.

HEART IN DIPHTHERIA

The cardioclinical and cardiographic observations reported by S. Calvin Smith, Philadelphia, are based on a study of 242 patients suffering from diphtheria of varying severity and extent, involving the respiratory tract. The vast majority presented a rapid heart rate as the only evidence of cardiocirculatory disturbance on admission. Seventy-two per cent. of the number progressed through convalescence from diphtheria without any further evidence of cardiac disturbance. The other 28 per cent., after a lapse of several days in the hospital, showed vagaries of the pulse and some of them gave evidence of grave cardiocirculatory fault. It thus became evident that the heart abnormalities encountered in these studies of diphtheria could be divided, for the purpose of discussion, into two groups in the order in which they appear, namely, a period of what may be called initial tachycardia, including the vast majority of admissions; secondly, those who later on presented manifestations which can be tentatively known as the irregularities of convalescence, embracing 28 per cent. of the total number. Smith points out that the earlier antitoxin is used intravenously, the less likelihood there is of eventual heart muscle poisoning. That objection which parents or patients may have to the intravenous use of antitoxin—the fear that it may cause sudden death—can be met by protecting the patient against the ever-present possibility of lethal anaphylactic shock through the simple expedient of first employing a desensitizing dose (0.5 c.c.) of antitoxin; an hour after this small subcutaneous dose the full therapeutic dose can be slowly administered intravenously. Heart care should extend far beyond the usual quarantine period prescribed by law. In protecting from overstrain the child heart which has passed through diphtheria or any other acute infection, regulation of school life is an important point to be considered. "Cardiac classes," where weaker children have comfortable furnishings, limited hours of study, stated and regulated periods of play, and where they are excused from routine gymnastics, fire drills, marches, etc., need not be limited to the large centers of population. Atropin is of doubtful utility in the tachycardia of diphtheria. Digitalis is distinctly contraindicated in diphtheria. Epin-

ephrin, despite its fleeing action and the consequent necessity of repeated administration, will likely prove to be the stronger member of the usually inefficient group of drugs which are employed in the treatment of diphtheritic heart block. Strychnin, by stimulating the suprarenals and causing an increase in suprarenal secretion, may have a similar beneficial cardiac effect, although the circulatory failure attendant on toxic heart block is likely to inhibit the response of the suprarenal glands to such stimulation. Caffein, in the latter days of convalescence from diphtheria, often proves to be a valuable aid in improving circulatory tone, as may also such systemic tonics as iron, quinin and strychnin.

THE APPETITELESS CHILD

Many children who are apparently well nourished and happy, are exceedingly small feeders, and are apt to cause no little concern to relatives and friends because of lack of appetite. While it is not wise to attach undue importance to such continued anorexia, it is always gratifying to the child's parents if the physician orders something which puts an edge on the appetite. Gude's Pepto-Mangan is the one ideal R in such cases, as it is exceedingly pleasant in taste, easily taken by the youngest child, and seems to have the special property of increasing the desire for food, without disturbing the stomach, or causing constipation. For older children, Gude's Pepto-Mangan in tablet form is often preferable to the liquid (the medicinal ingredients and therapeutic action being identical) because of its convenience and portability. The dosage should, of course, be regulated by the age and general condition of the child. Samples of either liquid or tablets, together with literature, are obtainable from the manufacturers, M. J. Breitenbach Co., New York.

VALUE OF DRUGS IN INTERNAL MEDICINE

That we are now witnessing a cautious revival of the use of drugs in the treatment of disease is the opinion of Lewellyn F. Barker, Baltimore. In the therapy of to-day, based on more accurate diagnosis and on enlarged conceptions of pathologic physiology, etiology and pathogenesis, a new hopefulness prevails. Available drugs are of real value in curing, in ameliorating and in preventing disease, and new drugs that are useful are steadily being discovered. Adequately to make use of the pharmacotherapeutic means at his disposal for meeting etiologic, functional, indications, the internist must be well trained in normal and pathologic physiology and should have become ecquainted with the known facts of etiology and pathogenesis. He should have learned in the pharmacologic laboratory the effects of the more important drugs on the normal animal body; and he should have had opportunity in the hospital wards, and in the laboratory of experimental pathology and therapy, to observe the changes that can be produced by drugs in disease. Very few have as yet had opportunity for the latter, but the medical schools should provide for it in the future. Teaching hospitals at present are, perhaps, more diagnostic institutes than institutes of therapy. It might, possibly, be wise to divide medical clinics into two parts, pa-

tients entering one division for general diagnostic study and emergency measures, to be transferred afterward to the other division for full treatment, the effects of which could be carefully studied by the students.

The introduction of new therapeutic methods and new drugs can scarcely be expected from now on to be arrived at by accident, or through pure empiricism. Every new therapeutic agent should be thoroughly tested in the laboratories as regards its activity and its dangers and, later, in the organized clinics, before it is introduced into general medical practice. But results in clinical experience must ever remain the final and crucial test of every form of therapy.

VALUE OF DRUGS IN SURGERY

For the maintenance of its essential difference in potential, the cell depends on (a) an abundance of fresh water; (b) oxygen; (c) rhythmic alternations of periods of rest and sleep. These fundamental requirements are the final guide to the surgeon in his selection of conserving and remedial agents. To insure an adequate supply of fresh water and of ogygen to the cells, as may be required in the individual case, George W. Crile, Cleveland, utilizes the transfusion of blood and the subcutaneous injection of water, both of which are given through the organism with increased force and certainty as the result of digitalizing the myocardium. Excessive activation by fear, worry or anxiety, with the resultant concentration of acids in the cells, is controlled by management, aided, when necessary, by bromids or by morphin; by using the readily taken, comparatively innocuous anesthetic, nitrous oxid-oxygen; by administering the anesthetic in the patient's room and taking him to the operating room under anesthesia, and in selected cases, by the preoperative administration of morphin and scopolamin for the purpose of maintaining an even metabolism, that is, an undisturbed internal respiration. Excessive stimulation of the nerve cells by the trauma of the operation is controlled by local, regional or spinal anesthesia with procain—the safest local anesthetic for general use. Postoperative activation is controlled by the application of heat, by morphin, by blocking the traumatized area with quinin and urea hydrochlorid. Atropin is used to prevent mucus, especially in operations on the respiratory tract. For the control of excessive metabolism as in postoperative hyperthyroidism, refrigeration, by literally packing the patient in ice, is specific. Bromids and morphin lessen the drive, and aid in securing the state of negativity essential for restoring the difference in potential in the cells. In certain cases in which morphin acts as a stimulant rather than a narcotic, large doses of bromid given by rectum will quiet the patient. Thyroid extract and thyroxin are used to supply the physiologic need in cases of thyroid deficiency; calcium lactate and parathyroid extract in cases of parathyroid deficiency. Alcohol and strychnin are rarely used. The former is of value in certain apathetic infections, especially in the aged or in those who have been accustomed to it. In general, with the exception of the employment of digitalis to stimulate a weak myocardium, the use of stimulants is scarcely worth while and may be harmful. The use of a solution of sodium bicarbonate as an agent for combating shock is of little, if any, more value than

water. In both war and civilian practice, it has been found that solutions of gum acacia not only have no value but probably have caused a number of deaths. Glucose solutions are of little value.

ANATOMY OF GONORRHEA IN MALE

Acute gonorrhea in the male, William T. Belfield, Chicago (Journal A. M. A., April 29, 1922), says is not only a "specific urethritis," but also frequently an acute vesiculitis within the first month. The latter is the serious factor, since without it there is never epididymitis, rarely infection of the blood stream, and seldom chronic gonorrhea discharge. The anatomic features of the urethra prevent efficient local medication of this canal; yet its tissues present a natural defense of high efficiency. By contrast, the infected seminal vesicle offers excellent conditions for successful local medication; but its natural defense is feeble. Standard treatment of acute gonorrhea includes no provision for medication of the infected vesicle; and standard treatment is admittedly inefficient and unsatisfactory. In eighty-three cases of acute gonococcus infection with standard treatment of the urethra plus prompt medication of the infected vesicles through vas puncture, there has been no epididymitis or arthritis, and but four cases of chronic discharge. It is understood that the vesicles are injected in acute genorrhea, not as a routine measure, but only in cases in which vesicular infection is demonstrated by the finger in the rectum.

MEDICAL FACTS

Willis's chords, circle, etc., are named for Thomas Willis (1621-1675) English physician and anatomist.

Winslow's foamen takes its name from J. B. Winslow (1669-1760), a Danish physician of Paris.

The Wolffian body (the mesonephros or primitive kidney), gets its name from Caspar Friedrich Wolff (1733-1794), German anatomist and physiologist, who is generally reckoned the founder of modern embryology.

Wrisberg's abdominal brain (the solar plexus), ansa, cartilages, etc., take their names from H. A. Wrisberg (1739-1908), German anatomist.

Sir Auckland Geddes, the present British Ambassador to the United States, is a physician.

The word alcohol is of Arabic origin, being derived from the particle "al" and the "kohl," an impalpable powder used in the East for painting the eyebrows. For many centuries the word was useed to designate any fine powder; its present day application is of comparatively recent date.

Alkali is an Arabic term originally applied to the ashes of plants, from which by lixiviation carbonate of soda was obtained in the case of sea-plants and carbonate of potash in that land of land-plants.

In the island of Barbados elephantiasis is so frequent as to be known as "Barbados leg."

Antimony, in the form of its sulphide, has been known from very early times, more especially in Eastern countries, reference to it being made in the Old Testament. The ancient Latin was stibium.

Arsenic was known to the ancients in the form of its sulphides. The oxide known as white arsenic is mentioned by the Greek alchemist Olympiodorus, who obtained it by roasting arsenic sulphide.

Schwann's membrane, sheath, etc., derive their names from Theodor Schwann (1810-1882), German physiologist.

Wagner's corpuscles and Wagner's spot (the geerminal spot of an ovum), take their names from Rudolph Wagner (1805-1864), German anatomist and physiologist.

The real chemical name of Analgene (C18 H16 O2), is orthoethoxyanamonobenzoylamidochinoline. Can you beat it?

The Bunsen burner was devised in 1855 by Robert Wilhelm Von Bunsen (1811-1899), German chemist, who was for many years professor of chemistry at Heidelberg.

Cholera (Asiatic cholera, Indian cholera, epidemic cholera), is endemic in the East over a wide area, ranging from Bombay to Southern China, but its chief home is British India. It principally affects the alluvial soil near the mouths of the great rivers.

The "boils," which were one of the plagues in Egypt, as mentioned in the Old Testament, were apparently the bubonic plague.

It appears from an old Chinese manuscript laid before the French Academy by Stanislas Julien, that a physician named Hoa-tho, who lived in the 3rd century, gave his patients a preparation of hemp, whereby they were rendered insensible during the performance of surgical operations.

In December, 1844, Dr. Horace Wells, a dentist of Hartford, Conn., underwent in his own person the operation of tooth-extraction while rendered insensible by nitrous exide. On September 30, 1846, Dr. W. T. G. Morton, a dentist of Boston, employed the vapor of ether to procure general anaesthesia in a case of tooth-extraction, and thereafter used it with complete success, which achievement marked a new era in surgery.

As a distinct vocation dentistry is first alluded to by Hero-dotus (500 B.C.). There are evidences that at an earlier date the Egyptians and Hindus attempted to replace lost teeth by means of wires or threads.

Galen (A.D. 131), taught that the teeth were true bones existing before birth, and to him is credited the belief that the upper canine teeth receive branches from the nerve which supplies the eye, and hence should be called "eye-teeth."

The largest ovarian cyst on record was removed by Dr. Elizabeth Reifsnyder of Shanghai, and contained 100 litres of fluid. The patient recovered.

Fauchard was the first to suggest porcelain as an improvement on bone or ivory for the manufacture of artificial teeth, a suggestion which he obtained from Reamur, French savant and physicist, who was a contributor to the royal porcelain manufactory at Sevres.

Daubenton's line, angle and plane take their names from Louis Jean Marie Daubenton (1716-1800), French physician and naturalist.

Cuvier's angle, canals, etc., were called after the famous French naturalist of that name.

The Fallopian tubes aqueduct, artery, etc., derive their names from Gabriello Fallopius (or fallopio), Italian anatomist, born in 1523 at Modena.

Gynecology may be said to be one of the most ancient branches of medicine. The papyrus of Ebers, which is one of the oldest known works on medicine and dates from 1550 B.C., contains references to diseases of women, and it is recorded that specialism in this branch was known among ancient Egyptian medical practitioners.

Vaginal hysterectomy was called Recamier's operation, from Joseph Recamier, French physician (1774-1852).

The first operation of ovariatomy is credited to Dr. Ephraim McDowell of Kentucky, in 1809.

Joseph Lemaire, French dentist, was attached to and accompanied the army of Rochambeau to America in 1781.

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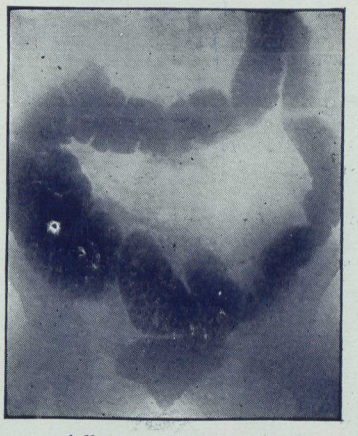
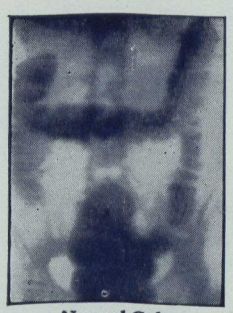
Indicated in adhesions

Adhesions are most likely to occur in the lower part of the colon. They are found present in cases of extremely obstinate constipation. A foremost roentgenologist and alimentary specialist states that in these conditions the lubricating action of liquid petrolatum is certainly indicated.



Adhesions of Pelvic Colon in Constipation

NUJOL is scientifically adapted by both viscosity and specific gravity to the physiology of the human intestines. In determining a viscosity best adapted to general requirements, the makers of Nujol tried consistencies ranging from a water-like fluid to a jelly. The viscosity of Nujol was fixed upon after exhaustive clinical test and research and is in accord with the highest medical opinion.



Normal Colon

The unmatched resources of the manufacturers, the perfection of their technical equipment and an expert personnel place Nujol upon a basis of unique superiority.

Sample and authoritative literature dealing with the general and special uses of Nujol will be sent gratis upon request to Nujol Laboratories, Standard Oil Co. (New Jersey), 44 Beaver Street, New York.

Nujol

TRADE MARK

A Lubricant; not a Laxative

Guaranteed by Standard Oil Co. (New Jersey)

INTRAVENOUS: Usual dose 0.1 gram, repeated every 2 or 3 days for 10 or 12 doses.
INTRAMUSCULAR: Usual dose 0.05 gram, repeated every 4 or 5 days for 10 or 12 doses.
Courses of Mercurosal injections should be alternated with arsphenamine treatments.

Mercurosal—

Companion of Arsphenamine

THE discovery of Mercurosal, a new synthetic mercurial bearing the same relation to inorganic mercury that arsphenamine bears to inorganic arsenic, signalizes a distinct advance in the mercurial treatment of syphilis.

Every doctor knows that arsenic *per se* has very little effect on the course of syphilis, but arsenic in the form of arsphenamine, the synthetic compound, is a powerful antiluetic.

And now there is this synthetic mercurial—Mercurosal—that seems already to have established itself as the therapeutic companion of arsphenamine.

Clinical investigators are agreed that Mercurosal has high spirocheticidal value.

Its toxicity is low—only one-seventh that of bichloride of mercury. This showing is rather remarkable in view of the fact that Mercurosal contains four-sevenths as much mercury as the bichloride.

The blandness of Mercurosal is probably the most striking feature. As one syphilographer expresses it, "* * * this drug does not irritate the veins, however small the veins may be." Repeated injections (27 in one case, in a section of a vein only ½ inch long) have not caused obliteration or other apparent injury to the vessel wall.

It may be administered intravenously or intramuscularly. In either case the quantity of mercury in the patient's body is under the ready control of the physician.

Parke, Davis & Company

MEDICAMENTA VERA