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PSYCHOSES AND NEUROSES OF URETHRAL ORIGIN.

By NOAH E. ARONSTAM, M. D. Detroit, Mich.

Member Northern Tri-State Medical Association, Michigan State Medical Society, Wayne County Medical Society, Medico-Legal Society (New York), etc.

MALADIES of a neurastheniac and psychic nature, bordering on the brink of insanity and mental aberrations of minor import, are apt to follow in the wake of diseases of the genito-urinary tract, especially those of the urethra and its adnexa. It is incredible with what persistency the mind of a patient will dwell on pre-existing affections, even if all traces of them have been satisfactorily eradicated. That class of patients is apt to become a burden not alone to themselves, but a positive annoyance to the physician as well, who, after repeated and painstaking examinations, becomes convinced that there is *nothing of any pathological significance* in the entire genito-urinary apparatus, and thus accordingly acquaints the patient of this fact and endeavors to remove his morbid conception. To his dismay, he will, however, discover that this is not so easy. The patient stubbornly clings to his fixed idea that there is something very grave in his urethral tract. No manner of persuasion and reasoning will avail under these circumstances, to dispel his delusion; the patient will run the gamut of a number of physicians, until either some charlatan by divers surreptitious means will actually alleviate him of his fancy or suggestive affliction, or else time alone will effect a cure.

It would be very interesting to learn the underlying etiological factors that give rise to this type of nervous manifestations coincident to the diseases of the male urethra. Various theories have been advanced. One of these goes so far as to ascribe the neurastheniacal symptoms to the absorption of a *virus* from the urethra, which, acting upon the nerve centers, is capable of creating a host of manifestations of a nervous or psychic character. Another of the theories propounded contends that unless a predisposing tendency to unbalanced mentality or a highly nervous temperament exists, such sequelæ are not prone to develop, the presence of a urethritis at some time merely acting as the exciting or determining factor. The latter seems to be the more plausible of the two theories, a feeble nervous mechanism and the perverted volition are wholly responsible for these morbidities in the mental sphere.

Among the diseases of the genito-urinary system that have been known to be instrumental in the production of the above disorders with their attendant train of symptoms may be mentioned *gonococcic urethritis*. In the author's opinion it is the most frequent causative factor in the province of venereal diseases. Of less importance in an etiological sense are the diseases of the urethral adnexa, namely, that of the prostate, seminal vesicles and epididymis. This article does not attempt to encroach on the territory of the purely psychical, pertaining primarily to the sexual domain. It only intends to discuss the neuroses and psychoses coincident to or following the various inflammatory conditions of the urethral canal, and prominently to that due to the invasion of the gonococcus. Every physician is liable to meet with cases of urethritis accompanied by some form of mental disturbance during the acute, subacute and chronic stages of the affection. But there are well authenticated cases on record, and their number is not inconsiderable, where, even after the total destruction of the micro-organisms as ascertained on microscopical examination, and after the complete cessation of the discharge and the disappearance of shreds and flocculi from the urine, in fine, after the patient is apparently cured he will absolutely insist that he does not feel well and express the opinion that he is not absolutely free from his gonorrhœa. The train of subjective symptoms that he enumerates is very uncertain and ill-defined. He will admit that he can detect nothing abnormal in the urinary stream; he experiences no pain or burning sensation on micturition; there is no "morning drop," but there is a peculiar, piercing or darting pain in the glans penis of a very evanescent character coupled by indefinite painful sensations in the vesical and hypogastric regions, and occasionally in the back. But it is the shooting pain in the glans that makes him apprehensive. Urinary examination will reveal nothing of importance; the urethroscope likewise will only elicit negative results, and still the patient keeps on clamoring for relief. If the latter is not accorded to him, he will invariably drift into other hands with similar success and will eventually become an inveterate melancholic or hypochondriac. The above is the only symptomatology that can be obtained on a close and careful examination of the patient. There is nothing pathologically palpable in his make-up. We have solely to rely upon his own subjective interpretation of his condition. To illustrate the above the author desires to append three cases taken at random from his record, as follows:—

Case 1.—S. F., æt. 29; single; family history negative. Past history: Had a gonococcic urethritis three years ago and fully recovered from it in about six weeks. St. pr. Specific urethritis contracted five months ago. No discharge on last examination, three weeks after the cessation of all symptoms referable to the urethra; no gonococci demon-

strable; normal and painless micturition. Flocculi and shreds absent from the urine on three glass test examinations with and without primary flushing of the urethra (confirmatory three glass test). Urethroscopic examination—anterior and posterior—negative. Complaints of vague and migratory painful sensations in the hypogastric and both inguinal regions. He believes he is not entirely well from his urethral trouble. Attempts to convince him of the contrary proved unsuccessful. Nervines and tonics seemed but little to influence his condition; neither was suasion of any particular value in ridding him of his imaginary trouble. He commenced to lose weight rapidly, and refused to be treated any longer, all the time vehemently begging for relief from his urethral disease. He left for the east to visit his parents. Their family physician informed the author later that his patient contracted the fulminant type of phthisis pulmonalis and is rapidly dwindling away. This case illustrates the *far-reaching effects of gonococcic urethritis* and the possible consequence of this to some practitioner's trivial affection of the urethral mucosa.

Case 2.—M. B., æt. 20, fruit vendor; unmarried. Family history negative. Past history: Has had repeated outbreaks of herpes preputialis and two years ago multiple chancroids. St. pr. Prepuce considerably elongated. Gonococcic urethritis for the first time. All urethral symptoms have completely disappeared, save for a few thin, curly and twisted shreds in the urine in the first glass without preliminary irrigation of the channel. Microscopic examination of the deposit-secured on centrifuging 4 cc. of urine—by granulo stain was devoid of any positive results. He complained bitterly of pain in the back and hypogastric region. Urine normal; no pathological constituents, save indican. Sp. gr. 1.024. Temperature and pulse normal. He attributes these painful sensations to the uncured urethral disorder, which he maintains is not perfectly well as yet, although the most scrutinizing urethroscopic examination in addition to the above evinces the opposite. The pain in the lumbar and vesical regions is getting worse from day to day; his mind unceasingly ponders over his imaginary condition, which he regards as serious. Internal medication intended to improve his general and nervous tone, supplemented by proper hygiene and diet utterly failed. At present the patient is yet under surveillance and it is difficult to foretell at the present juncture how this case will terminate. In this case a circumcision was performed with a view of diverting patient's morbid attention.

Case 3.—L. G., æt. 23; single; clerk. Past and family history negative. St. pr. gonorrhœal urethritis for the first time. Was treated by an advertising charlatan. Duration of disease and treatment 14 weeks. Urethral symptoms absent for nearly four weeks. No flocculi or fibrillæ in urine. Micturates regularly and normally. No gonococci

found on repeated examination with double stain. Complains of pain in the meatus urinarius independent of urination. The urethroscope reveals the urethra intact. (Combined inspection.) Urethra patulous and no strictures present (28 French). He claims that the pain is worse at night, of a darting or shooting character, and of but brief duration. His appetite is poor and he is losing flesh. The high cerebral stimulants avail but little. Suasion and reasoning proved futile. He acquired a haggard, pinched, hang-dog expression, walks stoopingly and haltingly, though formerly he was robust and his gait was straight and manly. He has consulted a number of physicians and nearly all of them pronounced neurathenia or "nervousness." He ultimately returned to the author, intimating that he was on the verge of committing suicide, if his condition does not assume a more favorable aspect.

These are only a few of a number of instances from the author's records coming under his observation, that proved exceedingly rebellious and unyielding to any form of therapeusis, on account of the *psychic or suggestive features of the malady*. It is very likely that the suicidal inclinations of the patients thus affected may at times be realized by them, or else they drift into an asylum as the unhappy recipients of various mental disorders, the origin of which can *doubtlessly be traced to the previous existence of some pathological condition of the urethral canal and its adnexa, pre-eminently to gonococcic or specific urethritis*. Under a systematic vigilance in a retreat or asylum, with the aid of proper hygiene and dietetic treatment, compulsory but wholesome outdoor work and exercise, whereby the mind will receive an impetus towards a different direction, together with both mechano-therapy and general massage, a cure may be reasonably expected in time. The fact, remains, however, that these cases furnish the most unsatisfactory class that falls to the lot of the genito-urinary surgeon.

MEDICAL THOUGHTS, FACTS, FADS AND FANCIES.

By JAMES S. SPRAGUE, M.D.,
College of Physicians and Surgeons of Ontario, Examiner Materia Medica, Stirling, Ont.

A MEDICAL friend, who is practising, and has for many long years been in active practice, in the city of New York, and well known to the readers of the very few medical journals that can be considered ethical, as one of the most classical and capable of contributors thereto, writes that our profession, as regards its money making capabilities, its time-honored position, and its influence, gives many evidences that, through the indifference and want of co-operation, the profession of New York has too many members who are living very closely near the edge of

want and ordinary comfort. If such conditions exist in a State, whose medical laws and requirements are the most exacting, and serve as models for other States, it is evident, when every calling, and all other professions are establishing rules for the conserving of all—and not least, financial interests—that are essential to their appearance, stability and usefulness in society and in their callings, that we are negligent of our primal duty to our families, not only for present days but future times. My very learned brother attributes many troubles as due to the absence of unity, and neglect in the reading of medical journals, to which, very often, men of age and vast experience of the movements of men contribute papers, full of warnings of the fatal driftings of the profession, even in some instances stating that there is no evil which “Zeal is not bringing to pass, even in our life-time.” Forebodings, too, there are, dismal in many cases, yet with consideration for those among us who have the love of our profession in greater esteem than that of some side-show business under nursing, which, though fascinating, is tending to detract our attention from subjects worthy of the closest and unrelenting study.

So many there are, duly licensed, in our ranks, yet so few there are who are really absorbed in interests, and these alone, belonging to the profession. Can, or do, the views of the professor, or of the city specialist, or of the superintendent of a sanitarium, or of the army surgeon, or of the city and country doctor, agree as to the requirements and essential interests or duties pertaining to medicine? Can, or does, the farmer-doctor, the drugstore-doctor, the Cobalt-crazed-doctor, or the many divisioned orders of doctors ever agree? My answer, as an ordinary country doctor, an observer of the most ordinary class, whose field for observation is very limited, is that we as a profession lack co-operation, and hence the invasion of our many rights by unprincipled hangers-on or parasites, and that we, too, are not to be classed even with clergymen (who teach the Gospel of Him who had not where to lay His sacred head) in their quiet manner in making uniform and satisfactory provisions for incomes, and a proof of their zeal has been well illustrated; for, at a recent session of those interested in church union, much interest was manifested in establishing a professional status and adjusting salaries. Yet, no public press utterances antagonistic followed, but if we, in our profession, that costs in time and in money, dollars as to cents, years as to regular seasons, were to consider such purely selfish affairs in combination, we would be held as worthy of criticism, censure and even abuse. However apparent are these facts, yet no one in contributions to medical journals comes out from the crowds to confirm our statements, or to formulate some rules or suggest means for the amelioration of conditions that are, and have been, actual

grievances, in fact, detriments to professional progress and personal success. "There is a surge in the crowd, there is a movement, and there arises a man who is larger than men, and the man comes up from the crowd." It is needless to state, we, as our fathers, take delight in the acknowledgment or evidence of power. We admire, too, the man who has, as he candidly thinks, a mission and whose inspiration is *Deus illuminatio mea*. Who is to be the vexillary? It has been said by wise men that the greatest benefactors of the race have been the most pronounced agitators, and another saying is, that necessity is the greatest incentive to organization, but system is really the most successful. If such are truths, who then will come up from the crowd to act the benefactor, and who to act the part as supervisor of a system? Being "easy marks," it is needless to state we have encouraged, through indifference, the establishment of such concerns as osteopathy, chiropractics, etc. Through indifference we hang on the walls of our offices dazzling chromos of patent medicine companies. Through indifference the pharmacist is practising medicine and pastes "*Brown's Corn Cure*," "*Pile Cure*" on his diploma. Through indifference we take journals—called medical—whose almanac character is easily noticed. Through indifference Christian Science and other delusions, interfering with medical practice, are allowed. Too much study do we give to phagocytosis and opsonins, tubercle bacillus, and the stegomya fasciata more than to materia medica. Through indifference, in many cities, the *Doctor of Ophthalmology* is bestowed through correspondence by so-called *Ophthalmology* colleges (Room 10, fifth flat).

And, in conclusion, through the indifference of those wiser than I, whose interests should be mine, and mine as their interests. I write this and expect neither thanks nor encouragement for my labor or zeal; for I do not believe I shall feel the inspiration that "the soul best discovers itself in the eyes of another" among the indifferents and intransigents. —This is *apologia pro mea*.

At a recent gathering of New York doctors, the following song was sung, and it was the favorite chant of the evening. We add it, thinking the reader may consider I am a revolutionist, even a medical anarchist:

"Give me a spoon of saccharine, ma,
 And a bottle of alkali,
 For I am going to make a pie, mamma,
 I'm going to make a pie;
 For John will be hungry and tired, ma,
 And his tissues will decompose—
 So give me a gram of bitartrate,
 And the carbon and cellulose."

SOME UNUSUAL CASES OF FRONTAL SINUS SUPPURATION.*

By PERRY G. GOLDSMITH, M.D., Toronto, Ontario.

THE object of the paper is to produce a discussion on the management of frontal sinus cases in which some unusual feature presents itself. A series of cases are detailed which show some of the difficulties and complications which one may meet, and the means which may be employed to secure fairly good results.

Frontal sinus suppuration is not infrequently seen by the general practitioner and overlooked, since the patient may complain simply of an inflamed eye, a nasal discharge, or what is at first thought to be supra-orbital neuralgia. Severe head colds lasting longer than usual and associated with severe frontal headache and constitutional disturbance should excite suspicion of ethmoidal or frontal sinus empyema. Morphine seems to have little power in these cases. Measures directed to ensure free drainage in the middle meatal region alone give prompt relief.

Frontal sinus disease is generally accompanied by antral suppuration. The antrum in many cases acts as a reservoir for the secretion from above. In cases in which the antral suppuration is due to the sinus above, lavage through the inferior meatus of the nose, performed only a few times, may be all that is necessary to cure the suppuration here; of course, the frontal or ethmoidal diseases must also be attended to.

Post-nasal discharge—a symptom very commonly complained of in this country—may be due entirely to purulent secretion flowing from the frontal sinus. The ill-health which in not a few cases is so marked as to make one think of tuberculosis wonderfully improves by measures directed to check the auto-intoxication.

Some case notes will, I hope, be of interest to you and may bring to your minds cases of your own in which there was some unusual or important feature that will teach us something regarding the management of these cases. It is the unusual case or the complications associated with this disease that give us the greatest difficulty; and if we write or speak of our difficulties and failures it will not only make us better for having done so, but will make every operator more at ease when similar cases come his way.

Case 1. A lady, aged 21, consulted me regarding a post-nasal discharge, or, using her own expression, "a dropping in the back of the throat." I cite this case because the symptoms are those which a large proportion of my patients complain of. The condition was of some years' duration and had not been influenced by anterior and posterior nasal sprays. Every winter for the last few years whenever she caught cold it

* Read at Toronto meeting of the British Medical Association, *British Medical Journal*, 17th November, 1906.

seemed to settle in and about the eye. When accompanied by a head cold very marked frontal pain ensued. Anteriorly could be seen a very marked enlargement of the anterior end of the middle tubinated body and a few small polypi bathed in thick creamy pus in the middle meatus. Posteriorly a large quantity of creamy pus flowed over the extremities of the turbinates. The anterior end of the middle turbinal was removed as a preliminary. On seeing the patient after a few days she informed me that her complaint had been entirely cured, but there was now a very disgusting discharge from the nostril, something she had never had before I operated. It was only after a good deal of talking that I was able to convince her that it was the same discharge flowing in a different direction. The antrum was washed through an opening made beneath the inferior turbinal and a large amount of very offensive pus was found. The frontal cavity was irrigated intranasally for several weeks, when the discharge stopped. No further irrigation or treatment was used for the antrum, which evidently had been filled from the sinus above.

Case 2. Lady, aged 33. This patient had been a sufferer from what appeared to be supraorbital neuralgia and nasal discharge. For many months at 11 o'clock each morning, with very marked regularity, she had a severe attack of pain in the forehead. The pain would nearly drive her wild, necessitating her going to bed for several hours. Morphine in large doses gave almost no relief. Both frontal and maxillary sinuses were quite dark on transillumination. The floor of the left sinus was exceedingly tender, but not bulging. A polypoid condition existed in both meatal regions. The unusual feature about this case was in the progress of healing after an external operation on the frontal sinus. The left frontal and left antrum were operated upon at one time. The temperature at the time of operation was 103° . Pus under pressure was found in the frontal sinus. This cavity was very large, extending quite to the outer end of the orbital ridge.

The patient was much better for the next two days, the temperature ranging from 99° to 100° . On the third day she developed a temperature of 103° and at night 104° , accompanied by marked distress in the head. The packing was removed from the wound, permitting a free flow of pus and giving immediate ease. It was now quite plain that I had missed some offshoot from the sinus, though I felt quite safe after the first operation. On mopping the cavity dry I noticed pus coming from above through a very small opening into which a fine probe passed a considerable way towards the junction of the front part of the forehead and the scalp. A general anæsthetic having been administered I laid open this cavity. It was quite large, and made with the sinus proper an L-shaped figure. Everything now progressed quite nicely, and when the granulations had almost closed the external wound a reinfection of the cavity

took place. At first I suspected that the dressings might be at fault, so I asked the patient to again come to me. The source of infection was then found to be an acute exacerbation of the disease in the other sinus, there being a small perforation in the septum between the two cavities. The other sinus was then operated upon, and without any unusual features both healed promptly. In the first sinus at the junction of the two lines forming the L there was a very marked disfigurement. I was unable to make any improvement by using a paraffin syringe, as the skin constantly gave way. I therefore adopted Paget's method of dissecting up a large flap consisting of the entire scar and tissues over the bone, and then plastering the depression with solid paraffin and suturing the flap in place. The cosmetic effect was excellent.

Case 3. A case of pan-sinusitis in a woman 64 years of age, all the sinuses undergoing radical operation, and complicated with a severe attack of facial erysipelas which infected the antrum, pharynx and larynx, but not the unpacked frontal antrum.

This heading contains practically all I have to say regarding this case. The cellulitis began twelve hours following the external operation on the frontal sinus. The attack was exceedingly severe, and the constitutional disturbance was very marked. Antistreptococcic serum was freely used, but did not appear to have any beneficial effect. The temperature was invariably higher for a few hours after the injection. The sinus packing was kept wet with a 25 per cent. solution of argyrol, and was not removed for two weeks, as I feared to expose the venous channels in the temporal bone to such virulent infection. Ultimately the case did fairly well, though the infected antrum never became perfectly clean, and some ethmoidal disease was not eradicated. The sphenoidal sinuses were not very thoroughly cleaned out, as the age and constitutional condition of my patient seemed to me to call for milder measures.

Permit me here to remark that I have very great difficulty in curing the ethmoiditis in all these cases. Killian's operation on the frontal sinus makes exposure of the ethmoid more perfect, still I feel I do not have that degree of success with suppuration in these cells that my reading makes me think others have.

Case 4. A case of frontal sinusitis, orbital phlegmon, and displacement of the eyeball downward and outwards, due to a primary sarcoma in the right nasal fossa. (Reported at Canadian Medical Association in Ottawa.)

In this case the only complaint my patient made was diplopia and a swelling of the eyelid, as if stung by some insect. The pus was evacuated in the orbit, and after clearing out the nose of a large mass of sarco-

matous material, free vent was given to the pus in the frontal sinus. The patient was made quite comfortable for some months, but within a year died of secondary involvement in the liver.

There is also a class of cases which cause me a great deal of worry as to the ultimate outcome and in which a deflected septum appears to be the cause. The after-treatment is here made easier by use of Killian's specula, but even then I experience great difficulty in reaching all the diseased tissues. I feel sure one is not justified in correcting any septal deviation in the presence of suppurative accessory sinus disease.

Case 5. A case showing the intimate relationship existing between the eye and frontal sinus. A man, aged 41, complained of having caught a very severe head cold which caused him very great distress in his eye. Apparently he was suffering from a severe attack of conjunctivitis with iritis. The eyeball was tender, tension quite full, but not plus 1, conjunctiva intensely injected and iris somewhat muddy and reacting feebly. There was but very slight tenderness in the floor of the frontal sinus. Intranasally was seen a deflected septum which, when straightened by Killian's long speculum, showed an enlarged middle turbinal pressed well against the bony septum. I was fortunately able to probe the fronto-nasal duct quite easily, and while doing so was surprised to notice a little stream of muco-pus running along the probe. The patient was immediately much more comfortable, and by using menthol inhalations was rapidly well. The ocular condition rapidly subsided without treatment.

I wish here to mention a device which has served me well in clearing a sinus of its diseased membrane with the least injury to any healthy tissue. I refer to the use of felt or cloth burrs. Mayer and Meltzer have made for me felt burrs of various sizes, which, when attached to a dental engine, will facilitate very greatly the cleaning of the cavity, as well as assist very materially in checking the hæmorrhage. Stout linen wound around a large dental burr does very well indeed, and I have found it of very great service in cleaning the walls of the maxillary sinus and checking what is sometimes a very troublesome oozing.

In conclusion, I feel like apologizing to you for taking up your time in presenting these few notes on cases which to me seem difficult and unusual, still to many or most of you may seem simple and commonplace. I cannot help thinking, however, that the status of the surgery of the accessory sinuses of the nose would be on a surer and more rational foundation if each of us would write rather of his failures and difficulties than of his success.

A CASE OF ACUTE PHLEGMONOUS GASTRITIS.

J. J. MACKENZIE, B.A., M.B.

Professor of Pathology and Bacteriology, Medical Faculty, University of Toronto.

ACUTE phlegmonous inflammations of the stomach are among the rarest of affections of that organ, between eighty and ninety cases only being recorded in medical literature.

Although the chance of diagnosis is in the majority of cases doubtful and the prognosis is exceedingly bad, only one or two possible cases of recovery being recorded, yet it is of interest to describe a case of this disease which came to autopsy in the Toronto General Hospital in May of the past year.

It is probable that the condition is somewhat more common than the literature records would lead us to suppose, since an autopsy is necessary to confirm any suspicions, and, as in our case, in the absence of a post-mortem examination the cases might be thought to be cases of perforative appendicitis.

In addition to this it seems most likely that all the recorded cases are not included in the more extensive articles on the subject, since we find in the article by Leith in 1897, in Allbutt's System of Medicine, 85 cases of the diffuse and circumscribed form, whilst in an article by Schaurwyl in the *Archiv für Verdauungs-Krankheiten* for 1906 only 83 cases are mentioned.

The condition occurs in two forms, a circumscribed and a diffuse form, the latter being about twice as common as the former. As Leith points out, the circumscribed form had been recognized as far back as the seventeenth century by Varandaens Tractatus de Morbis Ventriculi, 1629, the diffuse form, on the other hand, was first described by Cruveilhier in 1861.

The history of our case is as follows:—

Michael Kurish. Admitted to hospital Thursday, May 24th, 1906, under Dr. Gordon. He had been seen by Dr. Lehmann outside, who made a diagnosis of acute gastritis and sent him into the hospital.

Complaint: Pain all over abdomen and chest.

Family History not obtained.

Personal History: Patient is a laborer, age 28. Single and of Austrian nationality (no further information obtainable as patient unable to speak a word of English).

Physical Examination:

12 o'clock. On admission patient did not appear particularly distressed, but pulse was weak (rate 90), which, however, is much improved owing to an immediate administration of strychnine. Patient lies on his face and appears very nauseated. He is able to turn without difficulty.

The abdomen is soft with no special points of tenderness. There are confluent reddish purple blotches all over the body. The temperature is 101°. Examination of the chest revealed no abnormalities.

At 1 o'clock temperature was 101°.

At 2 o'clock a quantity of yellowish fluid was vomited.

Patient's pulse rose to 120 by 2.30.

At 3 o'clock patient again vomited and an hour later the respirations were 30. Temperature 102 (axilla) and pulse 128.

Patient vomited at 5 o'clock and again at 7 o'clock after having taken water, oz. iv.

At 8 o'clock the respirations were 36, pulse 152, and temperature 99. Milk, oz. viii., was given, but patient became very nauseated and suffered great pain in abdomen. The bowels moved and urine was passed. He seemed very restless. The pulse rate has dropped to 130.

At 10 o'clock the patient was in great pain and the pulse rate had risen to 152 and was of a weak and running nature. The abdomen was flat but rigid, especially on the right side, and was tender all over. The blotches previously noted had assumed a much deeper color. The patient was lying on his face. The face was clammy, but pinched; the features sharp, eyes sunken, the lips and tips of the fingers were cyanosed and patient very restless.

At 11.30 patient was examined by Dr. F. N. G. Starr, who found him in a critical condition, almost pulseless, feet and hands cold and facial expression indicating general collapse as often seen in peritonitis. Case was diagnosed as one of peritonitis and all hope of recovery abandoned.

The pulse became too feeble to be counted and the patient died at 12.40 a.m.

TORONTO GENERAL HOSPITAL. AUTOPSY REPORT.

There were no abrasions or sores on the surface of the body.

The thoracic organs, with the exception of some old pleuritis adhesions, showed nothing of importance. Omentum spread out over loops of intestine, which contains very little gas. Peritoneum moist over upper portion, becoming dry and sticky towards the mesentery. The right inguinal region contains purulent fluid in character slightly blood-stained. Pelvis contains quantity of this fluid. In region of the appendix there are a few old scars, the appendix itself is small and bent on itself, very slightly congested, somewhat more so at the tip. The mesenteric glands somewhat enlarged and soft. The wall of the lesser curvature, on anterior surface, is discolored and looks soft.

Stomach. Measuring along greater curvature, 48 c.m. Greatest width, $14\frac{1}{2}$ c.m. The gastric wall, 1.4 c.m. in thickness, soft and boggy; on cutting into the wall, purulent fluid oozes from the sub-mucosa everywhere; the mucosa is of a mottled pink and yellow, darker in color towards the greater curvature. At the fundus, in one spot, there is a break of the mucosa, but this looks as if it might be post-mortem; underneath the serous coat one can notice the lymph spaces; the lymphatics filled with sero-pus.

Intestines. Small intestine nothing abnormal; large intestine normal; the appendix vermiformis normal; mucosa pale; lumen contains small amount of fæcal matter.

The other organs show nothing of importance.

Bacteriological examinations were made of the peritoneal cavity and gastric wall.

All the cultures showed a pure growth of staphylococcus pyogenes aureus. The blood infection was so intense that a single drop of blood upon a blood serum slant gave a confluent growth of the staphylococcus. A microscopic examination of smears from the gastric wall and from the peritoneal exudate showed only staphylococci.

Histologically, the thickening of the gastric wall is seen to be chiefly due to the tremendous infiltration of the submucosa with pus; the mucosa also shows some infiltration although not nearly so extensive as the submucosa. The tissue spaces of the muscular coat also show more or less purulent infiltration and in the serous coat the lymphatics everywhere contain pus.

The condition is fairly evenly distributed throughout the stomach, but is more marked about the middle of the greater curvature and becomes less extensive as we approach the cardiac orifice.

The œsophagus is quite free from infiltration. On the other hand the condition extends through the pyloric orifice and sections of the duodenum show the same condition as the stomach but to a less degree, which extends practically as far down as the papilla of Vater.

It will be seen from this short clinical history and anatomical study of the case that it was a very typical example of the diffuse type of acute phlegmonous gastritis.

The clinical features were practically the same as those described by Leith and other writers on the subject, perhaps the only point of difference being the presence of the pronounced purpuric rash. The occurrence of a rash is the more interesting as, although it is not mentioned in any of the histories I have seen, it was a prominent feature of a case of Dr. Charles Wagner's which occurred at St. Michael's Hospital about six months earlier. In his case the rash was scarlatiniform.

The subject of the etiology of acute phlegmonous gastritis is a difficult one. In a certain number of the cases recorded the question was definitely settled since the gastric condition was secondary to other conditions such as gastric carcinoma, puerperal infection or pyæmia.

In the majority of cases, however, the gastric condition was primary and no point was discovered where the infecting organisms gained entrance. It seems most probable that the stomach wall itself was in this case the point of entrance into the tissues.

The fact that the condition is more common in men than in women and that a number show a history of alcoholism, has led some writers to give prominence to this factor, but personally I am inclined to think that this is overestimated. Dietetic errors is also given as a possible important factor. Leith points out that in a certain number of cases the disease followed immediately after a meal and in two the patients were in the habit of eating to excess after periods of abstinence.

This seems to me to be much the most important factor and in our case, and possibly in Dr. Wagner's, it seems the most likely explanation.

Both cases occurred in a colony of foreigners who were living under the most unfavorable conditions in regard to food. Dr. Wagner informs me that he made enquiries in regard to the food habits of these people and they seemed to regularly purchase meat which was of the very worst character on account of its cheapness; one member of the colony stated that they never paid more than five cents a pound for meat and as they probably often kept it until almost putrid it is most likely that conditions of gastro-intestinal intoxication would result which would favor, if not actually lead, to infection of the gastro-intestinal tract.

The organism in our case was, as stated above, the staphylococcus aureus. This has been found in other reported cases, but the majority of those which were examined bacteriologically showed the presence of the streptococcus, either pure or mixed with other forms.

INTESTINAL OBSTRUCTION.*

By A. A. MACDONALD, M.D., Toronto.

IT is impossible in the brief time at my disposal to cover the whole subject, so it is my intention to refer chiefly to cases coming under classes, examples of which have come under my notice in recent years.

Anything which offers complete resistance to the passage of the intestinal contents will give rise to a chain of symptoms easily recognized and immediately severe in proportion to the suddenness of onset.

* Read at a Staff meeting of the Toronto Western Hospital.

Persistent constipation, pain and vomiting are the three salient features of such an attack.

Referring to the first of these, the pain differs with its cause.

That due to an accumulation of fæcal matter is slight at first, but becomes more intense as time goes on. Pain caused by strangulation, whether such is due to constricting bands, hernia, or from pressure by some new formation, is apt to be severe from the start with periods of partial relief only when the pressure is reduced by the passage of some liquids or gases through the constricted portion.

When the onset of the obstruction is acute the pain is severe from the first, and the general symptoms are those of shock. The pulse rate may not be altered or it may even be lessened. Respiration is labored, the skin clammy, and the temperature may be lowered unless the obstruction is accompanied by an inflammatory condition.

The pain may be in any part of the abdomen, and is due to the peristaltic action of the intestines in the effort to overcome the obstruction. It may be colicky or continuous and is fairly easily differentiated from that due to simple inflammation of the appendix vermiformis. Tympanitic distension of course increases the pain and varies with the seat of the obstruction, as, when the impediment is high up the distension is usually not great, but if it is low down, tympanites is well marked and a source of great distress, and yields but slightly to medical treatment.

Vomiting is, as a rule, an early symptom and the higher in the intestinal tract the obstruction takes place, the more marked it is. The character of the vomited matter is distinctive. At first it consists of stomach contents mixed with ordinary secretions; afterwards bile appears, and, if the obstruction is low down in the large intestines, fæcal matter may actually be expelled from the mouth, causing the greatest distress to the patient through the taste and offensive odor.

The dark green contents of the small intestines, of a liquid consistency and having a fæcal odor, which often follows the bilious vomit of the earlier period of the attack, may not be confounded with the actual fæces appearing when the obstruction is low in the large intestine.

Constipation is absolute after the bowels have been emptied below the seat of obstruction, though a little mucus and blood may be passed.

I wish to refer to a few cases to illustrate my topic, and to serve for a basis of discussion, but first would remark that early operation offers the best hope in these cases, which in my experience have been helped by operation in proportion to the early date of surgical interference.

I do not wish it to be understood that I advocate an operation until a very thorough investigation has taken place, and a complete diagnosis

has, if possible, been made; but when you are thoroughly satisfied of the condition and that medical means have been fully utilized, then do not delay.

CASES.

1. This was an example of acute obstruction by a band of adhesion constricting the ascending colon. This case was referred by Dr. Russell and has been reported already. Was operated at Western Hospital. Complete recovery. No return.

2. This case was one of acute obstruction due to inflammatory adhesion in the ilium. Miss T. had suffered from septic general peritonitis. The operation was performed by Dr. J. A. Temple, whom I assisted. The removal of adhesion and sloughing portion of gut was effected, and the Murphy button employed was passed in about three weeks. The recovery was complete.

3. This was a case of strangulated umbilical hernia. The patient, Mrs. L., was referred by Dr. Gullen. The operation was performed in Bellevue Hospital by Dr. Temple and myself. Patient came to the hospital about twelve hours after the onset of acute symptoms, in a collapsed condition. The operation revealed a gangrenous ilium, of which there were removed eight or nine inches. A Murphy button was applied, which passed in about a fortnight. The recovery was complete.

4. Cases of strangulated inguinal hernia are important. I have had more cases of this variety in women than in men, and have not had one in which the bowel has had to be excised, or in which I have heard of any bad result following operation. I had one man die following operation for the relief of strangulated inguinal hernia. His death was due to deferred operation, and the bursting of an unsuspected abscess, apparently of a portion of strangulated omentum in the sac, which infected the abdominal cavity. The obscurity of the case was due to the kick of a horse over the portion of the inguinal canal which held a part of the omentum. I think that if a correct diagnosis could have been made sufficiently early for an operation before the abscess formed, the result might have been different.

5. A case of strangulation of a portion of the omentum in the femoral canal in a woman—Miss W.—giving rise to symptoms of obstruction, was operated on in Bellevue Hospital. The relief was complete.

6. Obstruction due to cancerous tumor of the ascending colon forms one of my cases. This patient had peritonitis, and was in an extremely critical condition when seen. A complete operation was not advised, and

a colotomy was done to relieve the symptoms. A similar case was presented by Dr. Clouse, and has already been referred to here. A colotomy relieved the symptoms.

7. In a case, Miss P., to which I was called by Dr. Spence, a complete obstruction was caused by a cancerous tumor above the sigmoid flexure of the colon. The cancerous mass was removed, and the ends of the healthy bowel were united by a Murphy button, which did not pass for months, though the patient gradually improved.

These are a few of the cases which have come to my notice, and which serve to illustrate the subject.

In some cases, rather than form an outside opening in the abdominal wall, it is well to short circuit the bowel, excluding the tumor by uniting the gut side to side, thus avoiding the distress of an opening on the surface of the abdomen.

All my experience leads to the conclusion that a complete diagnosis and an early operation are both important, and yield the best results.

CARBONATE OF CREASOTE IN THE TREATMENT OF PNEUMONIA AND BRONCHO-PNEUMONIAS OF CHILDHOOD.*

By ASHTON FLETCHER, M D., C.M., Obstetrician to the Western Hospital, Toronto.

MR. CHAIRMAN and Gentlemen,—At this season of the year perhaps the most common condition which we are called upon to treat is some form of pulmonary congestion, be it a pure pneumonia of lobar, lobular or miliary type, or of the mixed infections of the broncho- and pleuro-pneumonic forms. And I propose this afternoon to consider the treatment of these, having special reference to those cases occurring in childhood and treated by the use of creasote carbonate.

Of the cause there is little to be said, as the specific organism is isolated, and, where we have other micro-organisms present, we find the broncho and pleuro types. With the exception of the miliary form, the diagnosis is not hard. In the latter, the physical signs are often very difficult to make out. The pneumonic areas are small and are scattered over large space, or are deep within the lung substance and therefore not definitely recognizable under the stethoscope. But if we remember that there is one symptom plainly written on the child's face, namely, the dilatation of the alae nasi, with each inspiration, and the expiration is materially shortened and blowing in character, it will be less difficult.

The mortality in cities alone is given by some as 50 per cent. Wilcox, of the Post-Graduate Medical School, New York, quotes Wells as

* Read at the Clinical meeting of the Staff, Jan. 15th, 1907.

having determined, from the analyses of nearly a quarter of a million cases, a mortality of 18 per cent. The collective investigation of the British Medical Association is 12 per cent. Van Zandt, of Fort Worth, Texas, in the *Medical Record*, October 18th, 1902, says: "I have lately seen a condensed report for five years from the Roosevelt Hospital, giving an average death rate of 35.6 per cent." And in the next paragraph he says: "The ordinarily recognized death rate of 25 per cent."

If something can be done, therefore, to reduce this very high mortality we should certainly make the effort. I think that a thorough trial, with complete records of cases, will give a much lower mortality, if the method of treatment I am going to advocate is used. I show you the record of one case treated in this hospital. Unfortunately, another chart, which I wished also to show to-day, cannot be found. You will observe that the young man was in hospital 29 days. The highest temperature was on admission 104, from then on the return to health was very slow, and there was no crisis. He received 7 m. of creasote carbonate at first every three hours, and nothing else but calomel and salts. The pulse range was from 128 down to 100, and the respirations from 60 down to 45 at the end of the first week. On the fourth day the dose of creasote was doubled. On the fourteenth day guaiacol was used for three days without interruption in the gradual improvement of the patient. It is proper to add that he was dry cupped on three occasions and strychnia was given continuously as well as whisky after the first day. Tuberculosis was suspected because of the long continued rise at night, but the sputum was free from the bacillus though frequently examined. The other case was that of a man who had been treated in his home suffering with delirium tremens, and brought to hospital with pneumonia developed. He recovered also, and in like manner without crisis. He was given strychnia and dry cupped. The members of the staff who saw these two cases united in giving a most gloomy prognosis.

For over six years I have used carbonate of creasote in these cases, and although I cannot give the exact number of cases so treated in that time without going over my account books, as I kept no record of my cases, still I shall be well within the number when I say 50. Two of these died. One was eight days old and had been congested from birth. The mother states that she had lost two others in the same way within week of birth. There was also whooping-cough in the family at the time. The other case was really hopeless from the time I first saw her.

Van Zandt was first led to try the remedy in this way. He had been called into the country to see a surgical case, and, on the way home he was asked to see a child who, he found, was suffering with pneumonia and was so emaciated that, as he had not his buggy case with him, but had a bottle of liquid peptonoids with creasote, he left this with instruc-

tions to give a teaspoonful every hour in water. He called next morning and was surprised to find the temperature and pulse much improved and the respiration also easier. On making careful inquiries for a history of crisis, he found that he could not get one, but that the mother stated that the child had begun to improve after the third hour. As the babe was doing nicely he decided to continue the medicine, only less frequently. The child recovered without any crisis or any further trouble. Puzzled over the absence of crisis and the recovery of a case he had thought was hopeless, he gave the preparation another trial and had somewhat similar a result; then he tried the oil of creasote and had as good results, but the oil was hard to give to children and not borne well by some. This led to the substitution of the carbonate. During this series, there had been an absence of true crisis. In order to satisfy himself that the results were due to the creasote, he then withdrew the drug when cases were improving and he thus found that these cases ceased to follow the usual course and get well, but that the fever returned and the pulse and respiration again went up, a relapse which was immediately checked by a return to the creasote. This was in 1894 and since then he has continued to use creasote carbonate, and has arrived at the following conclusions: 1st, creasote seems to be a specific for the pneumococcus; 2nd, there are some few cases which do not respond to the action of the drug; 3rd, in those which do, the disease terminates by lysis and not crisis.

In 1900, Cassoute and Corgier, two French physicians, reported that after continuous administration of fairly large doses of creasote carbonate, containing 91 per cent. of creasote and made from it by the action of nascent carbon dioxide, in most cases a typical fall of temperature occurred during the first 24 hours of treatment, and if the remedy was persisted in for a sufficiently long period of time, the apyrexia became permanent. Relapses and sequelæ so frequently seen under other methods were entirely absent.

Van Zandt has collected 1,130 cases treated by this method, with 56 deaths, a little less than 5 per cent. In these he does not include his own experience, for he says: "I have constituted myself advocate and do not wish to testify in my own behalf." Elsewhere his death rate is found and is 5 per cent.

At the recent meeting here of the British Medical Association, Henry Ashby, in a paper on pneumococcal infection during early life, states that pneumonia is a common disease, and that over 10,000 infants die annually in England and Wales of it, and a like number from bronchitis. As we have seen the mortality from the ordinary methods of treatment to be 25 per cent., and as I think I have shown that the rate when creasote is used to be only 5 per cent., I am sure you will agree with me that

we owe it to ourselves and to our patients to give this drug a continued and accurate trial, keeping records of the cases and having them compiled and published, so that the profession can join hands in saving the 16,000 annually in England and Wales, and reducing the 25 to 5 per cent. here in America.

The method of action of the drug is not thoroughly understood, but from my own observation it seems to be that the creasote is carried into the blood stream unchanged and conveyed to the lung cells to be excreted. The breath is soon heavily laden with the aroma of creasote, and the skin also is concerned in the elimination. If this is so we can easily see why it is a drug of so much benefit, for it is brought into direct contact with the tissues in which the pneumococcus is developing, and being an antiseptic of no mean properties we expect and get what we expect, prompt amelioration of symptoms.

The dose is large, for a babe newborn will take a drop an hour. For adults, the dose is 7-15 minims each 2, 3, or 4 hours. The stomach stands it well. I give it on sugar alone.

INFLUENZA.

By JOHN FERGUSON, M. A., M.D., Toronto

INFLUENZA is a disease with so many complications and variations, and is so prevalent, from year to year, that it merits careful study. With this end in view, *The Practitioner* (London) publishes in its January issue a series of papers dealing with the disease from many standpoints. These papers are here abstracted.

Professor T. Clifford Allbutt, of Cambridge, speaks of influenza as being "of protean diseases the most protean; more diversified even than syphilis." He points out that Dr. Newsholme has shown that there is a very high death rate from diseases of the respiratory organs during an epidemic of influenza, it may be difficult in many cases to detect the specific cause. He suggests that the infection of influenza, fighting in part under its own flag, and in part treacherously under other flags, influence unfavorably the mortality in other diseases, as those of the nervous system and circulatory organs.

The subtle virus of influenza may apparently leave the system, only to manifest itself in some other form, as an attack of neuritis several weeks after recovery from the primary sickness.

There appear to be several microbes which are responsible for the disease. They may be capable of producing a somewhat similar toxin; or, one of them may act upon the body so as to enable another organism

to have an effect it otherwise would not. The infection of influenza has a disastrous effect along with tuberculosis and pneumonia. It is a feature of epidemics of influenza that there are many instances of mixed infections, and that these are often very severe. Thus it is that scarlet fever, pneumonia, tuberculosis, cerebro-spinal fever, erysipelas, etc., seem to take with them other evil spirits even worse than themselves.

Influenza may simulate other diseases. Thus it may take on the characters of syphilitic mania, or typhoid fever even to the rose-colored spots, or acute meningitis.

The disease is undoubtedly infectious from person to person. The Medical Society of London, in 1805, issued a report that it was communicated from the sick to the well by direct infection, and this appears to be true of all its forms, as well as of the catarrhal type.

The disease may come on with great suddenness, and the person be prostrated in a few minutes. During the progress of the disease there may be very copious sweatings, with rigors and rise of temperature. The gastro-intestinal form may prevail; and the muscular tissue of the stomach and heart may be greatly impaired. The poison may very suddenly affect the heart muscle, and life be ebbing away.

In the treatment of the disease all depressing drugs must be avoided and the patient's strength carefully maintained. The bed is the safest place for all sufferers from influenza. Salicin, or aspirin with caffeine, may be carefully employed at the beginning for the relief of the myalgia. In the treatment of the disease, oil of cinnamon, in 10 minim doses every two hours, reducing the frequency as required, has found favor. Cold baths, douching and sponging should be avoided. In cases of prostration in pneumonia alcohol is useful. The heavy sweats may be controlled by nitrite of amyl, 1-30th of a minim three or four times a day. Massage, injurious in the acute stage, may be helpful in the later convalescence, if called into requisition with care.

Sir Douglas Powell, President of the Royal College of Physicians, gives a few notes on some of the clinical types of the disease. Since 1890, neuritis has been much more frequent than it formerly was. Sometimes influenza induces true spasmodic asthma, which may recover, or take on the recurrent form. For these balmo-therapeutics are useful. Influenza may cause much nervous depression, severe headache, mental aberration, sleeplessness, paralysis, paraplegia, intense hyperæsthesia, and paralysis like that of diphtheria. The respiratory features are rather well marked. There is an explosive inspiratory crepitus scattered through the lungs. There is a straining paroxysmal cough at first with little and difficult expectoration, which in a few days becomes profuse, glutinous and purulent. When there is the added infection of pneumonia, the features of the latter disease are added to those due to influenza. Cases

of pneumonia in influenza are always due to the pneumococcus in addition to the influenza infection. Towards the close of the attack there may be anginal attacks. These attacks are most probably caused by an increase in the arterial tension, as the urine often contains a large amount of urea. There was no organic disease of the heart to account for the angina.

Sir William Broadbent, Physician to His Majesty the King, adds an important section on the value of quinine in influenza. As a prophylactic two grains in the morning has proven very serviceable. Several instances of this usefulness are given in schools and colleges. In the treatment of an attack of influenza, he employs drachm doses of ammoniated quinine with two drachms of liquor ammoniæ acetatis every hour for three doses, then every four hours. In the fulminating form where the patient becomes comatose, large doses of the hydrobromate of quinine by the hypodermic method has arrested the attack and relieved the unconsciousness.

Sir Dyce Duckworth, of St. Bartholomew's Hospital, offers a suggestion on the source of the infection. He mentions the fact that many who go from Britain to Europe, and especially along the Mediterranean shores, are suddenly taken ill. In these places there is a general bad condition of the ventilation of rooms and railway cars. These badly ventilated compartments become infected and perpetuate the disease.

Sir John Moore, Professor of Medicine, R.C.S., Ireland, contributes some "Thoughts on Influenza." He recalls his early memory of influenza as meaning an acute catarrh of the mucous membranes from the nose to the bronchial tubes. This was a sort of echo from the epidemic of 1847-8. Gradually the name died away.

In 1889, the disease reappeared in severe epidemic form, beginning in Central Asia and spreading through Siberia and westward to St. Petersburg and over Europe. In 1890, it overran America, Africa and Australia, thus spreading over the whole globe in a few months. Since then there have been repeated outbreaks in many countries.

Influenza is an acute, specific, infective fever of sudden onset, after two or three days' incubation, with a disastrous influence on the nervous and circulatory systems, and rendering the person peculiarly liable to secondary infections. Adults suffer much more severely than children from its complications and dangers. Among the symptoms may be mentioned chills, rigors, headache, pains in eyeballs, rheumatic pains, insomnia, delirium, photophobia, earache, anorexia, loss of appetite, nausea, vomiting, catarrh of respiratory tract, and neuralgia. In fact it is very protean, and has the faculty of picking one's weak spots.

The principal forms of the disease are:—

1. The neurotic, neuralgic, rheumatoid type;

2. The cardio-pulmonary type, in which weakly people may sink very rapidly.
3. The gastric, or gastro-intestinal type, in which there may be much anorexia to complete loss of appetite.
4. The febrile type, especially common among children.

The disease has a marked proneness to relapse. The death rate for all cases is about two per cent., but it causes many serious complications and sequels which add to the death rate. It is a well known fact that other infective diseases are more fatal when influenza is epidemic.

Pneumonia is one of the most frequent of the complications of grippe. The bacillus influenza of Pfeiffer may give to a primary pneumonia a lobular rather than a lobar type. But on the other hand, it renders the system specially susceptible to the pneumococcus of Fränkel. These pneumonias are usually insidious in their onset and atypical in course. Influenza adds greatly to the dangers of pulmonary tuberculosis. On the nervous system the disease may do much damage, and there is hardly a nervous symptom which it may not produce. It may cause many organic diseases of the brain, spinal cord, or nerves, and also many forms of psychoses and neuroses.

The treatment is expectant and common-sense along the lines of palliation and relieving the symptoms. When a person is taken ill, he should go to bed at once, as rest, warmth and quiet are three sovereign remedies. Among drugs, probably ammoniated tincture of quinine is the favorite. For the pains salicylate of soda, or phenazone, or acetanilide combined with citrate of caffeine may be ordered. In the failing heart of influenza the main reliance must be placed on strychnia, hypodermically in doses of gr. 1-30 combined with digitalin gr. 1-100. By these means unpromising cases may recover. Alcoholic stimulants should be ordered with the utmost circumspection as the nervous system is very excitable and unstable in influenza, and intemperate habits readily be created. Generally speaking, alcoholic stimulants are harmful.

Dr. Samuel West, St. Bartholomew's Hospital, takes up "Some General Considerations on Influenza." The present epidemic has lasted sixteen years, a condition that is unprecedented. In former epidemics it lasted one or two years. It is now regarded as very infectious, whereas in former times it was thought not to be contagious, but solely epidemic in character. With regard to the contraction of the disease, it appears that exposure to cold is an important factor; as many persons become ill immediately after a chill.

One attack affords but little or no protection, and a person may have several attacks in one season. It would seem that some are prone

to the disease, while others are almost immune naturally. In the spread of the disease the increase in travel and the facilities therefor may have some connection.

The fever is usually moderate in amount and of three or four days' duration. If it runs on for eight or ten days with headache, the existence of typhoid fever should be suspected; and if there be pulmonary complications it may be a case of pneumonia. Following the fever there is usually a period of post-febrile depression. The only diseases in which this is equally marked is typhoid fever and diphtheria. This depression is not in proportion to the severity of the attack, as it may be severe after a mild case. During this depression the patient feels thoroughly ill and is fit for nothing. It may, however, pass off quite suddenly. In some cases this depression merges into the cachexia of cancer. It would appear as if the influenza lowered the resistance and the malignant trouble began, or rapidly increased.

With regard to pneumonia, which is the most frequent and serious complication of influenza, it appears to come on during the period of post-febrile depression, and is pneumococcal in character, and not due to the influenza bacillus. The disease runs the usual course of pneumonia. It presents a marked tendency to spread, and is more likely to end by lysis than the usual form of the disease. It may appear in several parts of the lungs at the same time, or appear in one part, while resolving in another. In this way it is often patchy, or broncho-pneumonic in type. One form is patchy in consolidation and may resemble tubercular disease.

Influenza does not appear to specially lead to phthisis. If this disease be present, an attack of influenza may greatly increase its activity.

With regard to the heart, the disease does not appear to cause valvular trouble, but has a marked tendency to impair the heart muscle and its nerve supply. Præcordial pain and cardiac syncope are the most frequent forms of heart trouble. The pain may be neuralgic or anginal in character, both occurring in paroxysms repeated at short intervals. The heart may remain weak for a long time, even though not specially affected at the time of the influenza. The sweating which occurs during and after the disease may be extreme and very persistent. Nitrite of amyl acts well in such cases.

The treatment must be mainly symptomatic. Depressant treatment should be avoided. The after depression requires special care.

Dr. Hector Mackenzie, of St. Thomas' Hospital, discusses the "Respiratory Complications of Influenza." He speaks of the affection of the larynx, and the mucous membrane of the trachea and bronchi. The smaller bronchi are filled with a finely granular material. Broncho-pneumonia is the most common change in the lungs. There is a patchy consolidation varying in size from a pin's head to a pea. In these islets

Pfeiffer's bacilli are numerous, but other organisms, as the pneumococci, streptococci, or staphylococci, may be present. There is a tendency to form minute abscesses, and gangrene of the lungs may occur.

The laryngitis, tracheitis and bronchitis may be very persistent; and the cough slow to disappear. Broncho-pneumonia, as a rule, is not ushered in by a rigor, nor does it disappear by crisis. The pneumonia caused by the influenza bacillus is specially lobular in type. When lobar there is also the pneumococcus. There is a form, due to the streptococci, which has been called cellular pneumonia. In it there is intense hyperæmia and the cut lung looks fleshy. There is no rusty sputum.

Pleurisy occurs in 12 to 33 per cent. of the cases of influenza. It is usually sero-fibrinous, but may be purulent.

In the treatment of influenza, the patient should be put in bed, in a comfortable, well-ventilated room. Rest must be enjoined until the fever has disappeared. As there is no specific, the treatment must be directed to the symptoms. When the cough is dry and paroxysmal heroin hydrochloride in doses of gr. 1-36 to 1-12 every one to two hours is useful. When the cough is frequent and severe the following is recommended:—

R Morphine Hydrochlor. gr. $\frac{1}{2}$.
 Apomorphine Hydrochlor gr. $\frac{1}{4}$.
 Acid Hydrochlor Dil. m. xx .
 Syr. Prun. Virgin. ss iv.
 Aq. ad ss ii.
 M Sig. ss i occasionally.

When there is bronchitis the following may be prescribed:—

R Sod. Bicarb. gr. xv.
 Sod. Chlorid, gr. v.
 Sp. Chloroformi. m. v.
 Aq. Anise. t. ss i.
 M. Three times a day.

When the secretion is thick and expectorated with difficulty preparations of opium should not be given. Warm poultices or turpentine stupes often give relief.

In cases of pneumonia the strength must be maintained. Digitalis, strophanthus, caffeine, and strychnine are useful drugs. Oxygen inhalations will relieve when there is dyspnœa. Alcoholic stimulants are called for when there is prostration and a failing heart.

The diet should be light and nutritious. In some cases it must be almost of a liquid character. The mouth should be kept clean and the bowels acted upon. Fresh air is valuable both as a prophylactic and curative agent. The room should not be kept too warm, and must at all times be kept well ventilated. Stuffy, close rooms are potent factors in the spread of the disease, as is well seen in some hotels where the rooms are small and the air impure.

Dr. St. Clair Thomson, King's College Hospital, takes up in his contribution the "Effects of Influenza on the Nose and Throat." He divides his subject into the inflammatory and neurosal results.

In the inflammation caused in the nose there may be epistaxis as one of the first symptoms. There may soon appear a muco-purulent or purulent discharge. The neighborhood of the orbits may become tender and puffy. The branches of the fifth nerve are liable to be involved and painful, causing supra-orbital neuralgia and face-ache. The real cause in most cases for this pain is inflammation in the frontal, ethmoidal and maxillary sinuses. Pus may form in these cavities. The pain may continue after the cessation of the discharge. When the sphenoidal sinus is affected the symptoms are post-nasal discharge, pain in the occiput or back of the eyes. The infection may extend into the ear and mastoid cells. There is often also an inflammation of the larynx and pharynx.

The nervous disturbances are the loss of the sense of smell, or the sensation of a foul smell, *cacosmia*. This is usually due, however, to some fetid discharge. In the pharynx there may be a paralysis or a dysphagia; and *anæsthesia* and *hyperæsthesia* are not uncommon.

In the larynx a paresis is sometimes met with. There may also remain a very obstinate cough, which is sometimes due to discharges trickling into the naso-pharynx. The infection from this condition may cause *swats*, loss of weight, loss of appetite, and rise of temperature.

The organisms found are the *micrococcus catarrhalis*, *pneumococcus* and *bacillus influenza*.

The treatment of these conditions is important. The patient should be sent to bed with a good supply of bed clothing, with the windows open, and the head wrapped in a wollen shawl. A hot bottle or rubber bag relieves pain locally. Hot fomentations are useful. *Morphia*, *aspirin*, *phenacetin*, etc., may be employed for the relief of pain. Sprays and lotions should not be used in the acute stage, as they may carry the infection to the ear. A mixture of menthol, half an ounce, and tincture of eucalyptus, three ounces, of which a teaspoonful is put into a jug of hot water and the steam inhaled every two hours, affords much relief. A suppurating antrum can be opened through the nose and the cavity washed with normal saline solution. The frontal and sphenoidal sinuses may be relieved by packing the middle meatus, for a few minutes daily, with a pledget soaked in five per cent. cocaine and adrenalin. When the acute stage is over, an alkaline wash is helpful.

In cases of *anosmia* do not use lotions containing carbolic acid, menthol, camphor, eucalyptus, thymol, etc. Tonics, especially *strychnine*, will do more good.

The treatment of the resultant cough is often very troublesome. The

various branches of the pneumogastric may be affected, and hence the so-called stomach cough. Sedatives and anodynes may be tried, and correctants of the condition of the stomach. Begbie's mixture can be recommended :—

R	Acid. Hydrocyan. Dil.....	ʒ ss.
	Acid. Nitric, Dil.....	ʒ ss.
	Glycerini.....	ʒ iv.
	Infus. quassie.....	ʒ vi.
M	Sig. ʒi in water three times a day.	

Dr. Norman Dalton, Professor of Pathology, King's College, offers some valuable suggestions and thoughts upon the "Gastro-intestinal Forms of Influenza." It is well known that the digestive organs may suffer during an attack of influenza. The tongue is often coated, there is loss of appetite, anorexia or vomiting. Hæmorrhages from the stomach or bowels may occur. Frequently there is constipation, but diarrhœa is not uncommon, and there may be both flatulence and colic. The poison of the disease seems to act very severely at times on the nerve supply of the digestive organs.

The forms of influenzal affections of the alimentary canal are :—

1. Catarrh of the stomach or intestines, or both.
2. Inflammation, more or less severe, affecting these parts.
3. Cases which simulate typhoid fever.
4. Cases of a choleraic type.
5. Cases which simulate ulcerative colitis.
6. Cases of anomalous type.

The treatment of all forms of gastro-intestinal influenza must be expectant. On account of the tendency of the heart becoming affected, strong measures must be avoided. The cold bath is very dangerous, and antipyretics and purgatives must be used with caution. Strychnia, digitalis and alcohol are likely to be required. Good food may be derived from intestinal antiseptics.

Donald Armour, F.R.C.S., Surgeon West London Hospital, offers some thoughts to show that appendicitis is more common during an epidemic of influenza. He quotes authorities to the effect that appendicitis appears in epidemic form, more or less general. The appendix is liable to suffer when there is a general infection in the body. In this way when influenza is prevalent, appendicitis becomes more prevalent. The points noted are: That the appendicitis was contemporaneous with an influenza epidemic, that just prior to the epidemic of influenza cases of appendicitis were not noticed; and that sometimes the appendicitis and influenza were concurrent. Some observers have noted this connection in a number of epidemics of influenza. The reference to such writers

as Kelly, Osler, Gagnière, Choisy-le-Roi, Bottomley, Marklem, Larger, Florand, Franke, Deaver, etc., would seem to establish a causal relationship.

Dr. John Cowan, Physician Royal Infirmary, Glasgow, considers the "Cardiac Complications of Influenza." In influenza there is a strong tendency for the myocardium to suffer, rather than the endo- or pericardium. It is for this reason that the danger is immediate rather than remote, and it explains why those with fatty hearts and alcoholics bear influenza badly.

If the patient does not take proper rest, there may be severe attacks of syncope, even fatal. During convalescence the heart's action may become rapid, irregular, systole poor, especially if there was any prior flaw in the organ. These symptoms are more likely after a severe attack, and it is necessary to recognize them early.

On making exertion there is palpitation, tachycardia, faintness, or exhaustion, cold sweats, dyspnoea, etc. During convalescence there is less danger, though there may be much discomfort, persisting for months, and a fatal syncope may occur.

The pathological changes are in the cardiac muscle. The fatty and granular degeneration, found in all infections, is specially well marked in influenza. Some of the heart failures, occurring some time after the illness and without marked muscle change, are due to neuritis in the cardiac nerve supply.

In all cases of cardiac complications, early or late, rest is necessary. During the acute stage strychnine, ammonia and alcohol are our best remedies. In some cases digitalis may be useful. In the cardiac weakness of convalescence, strychnine, iron, arsenic, the hypophosphites and change of air must be relied upon mainly. Cardiac murmurs are not uncommon after influenza. They are due to dilatation and require rest and tonics.

Dr. Wilfrid Harris, of St. Mary's Hospital, discusses "The Nervous System in Influenza." He contends that the nervous system suffers more severely than any other portion of the body, and the virus of the disease is very largely expended upon it. The effects of influenza on the nervous system may be divided into those occurring at the onset of the disease, during its course, or as sequels to it.

After about two days' incubation, the patient is taken ill with frontal headache, pains in the eyeballs, in the back and limbs, and prostration. There may be early in the disease a marked loss of muscular power. At the very onset there may be sudden collapse, such as is met with in cholera.

The symptoms, as they affect the nervous system, or through it other organs, may be described as follows:—

1. The headache at the onset is usually very severe, is frontal, prevents sleep, and may even cause delirium through its intensity. It usually abates in two or three days.

2. The pains in the back and limbs are sudden and severe, and of a darting character, somewhat like the lightning pains of tabes. There is severe pain in the back of the eyeballs, and often throughout the chest and abdomen, simulating other diseases, as pleurisy, pericarditis, hepatic, renal or intestinal colic. There may be pains in the joints resembling rheumatism.

3. There is usually considerable pyrexia, varying from 101° to 105° .

4. Very copious sweats are common, drenching the patient and accompanied by rigors in many cases.

5. A group of symptoms like those of seasickness.

6. There may be attacks of sneezing resembling hay-asthma, or difficult breathing like ordinary asthma, and pains in the chest like those of angina.

7. The heart action is not generally much increased in frequency, and may only go 80 or 90, while the temperature is 103° to 105° . At times it becomes rapid, however, with the presence of dilatation. Later on the symptoms of Graves' disease may appear. Cerebral thrombosis, hæmiplegia, aphasia, etc., have been noted.

8. Meningitis, both cerebral and spinal, have been met with, and the cranial nerves may become involved.

9. Several important ocular complications are met with, such as swollen optic discs, optic neuritis, retinitis, strabismus, embolism, or thrombosis of retinal artery and sudden blindness, iritis and choroiditis, and varying degrees of ophthalmoplegia.

10. In the brain conditions due to a severe toxæmia are met with. They are the features of an encephalitis and meningitis present in some instances. These conditions have been known to cause convulsions and coma. Permanent impairment of some nerve structure may result, causing paralysis. The serious implication of the nervous system may be first manifested by hysteroid convulsions, or the cataleptic condition.

11. Myelitis, often accompanied by meningitis, occurs in some cases. This condition may be followed by paraplegia, spastic paralysis, loss of sensation in some portions of the body, or death. During epidemics of influenza there are cases that closely resemble Landry's paralysis. In the latter disease there is the absence of congestion of the cord and its meninges found in myelitis.

12. Neuritis, such as brachial or sciatic, or local and general, with neuralgic conditions and herpes, are not uncommon. These complications come on suddenly but disappear slowly. Large nerve ganglia, such as the Gasserian, are sometimes involved.

13. Among some of the other nervous complications should be mentioned the possibility of loss of smell, loss of memory, inertia of mind, bulbar paralysis, myasthenia gravis, epilepsy, migraine, paræsthesia, and severe neurasthenia.

Dr. T. Claye Shaw, of St. Bartholomew's Hospital, contributes a paper on "The Psychoses of Influenza."

In typhus and typhoid fevers, pneumonia, diphtheria, variola, cerebrospinal meningitis, syphilis, etc., two classes of symptoms must be noticed, namely, those due to the development of the organism and those from the toxins caused by them at a later stage of these diseases. In the same way in influenza there is an early delirium caused by the organism and a later form from the toxins.

There may also be hæmorrhages causing apoplectiform conditions and paralyseš or epilepsy. There may be a purulent encephalitis. In every epidemic of influenza there are a considerable number of psychic cases.

It would appear that in the causation of psychic derangements, influenza affects impartially those without a hereditary tendency to mental diseases, as well as those with such a tendency. It would appear that the toxins of the disease have a specially depressing influence and suicides become more frequent when influenza is prevalent. Hence the importance of rest to enable a good recovery to be made. Many cases may drift on into melancholia if not properly treated.

1. In some instances there is an acute dementia of the melancholic type for a few days prior to the invasion of the influenza attack. These must be watched with care, as the true nature of the attack is, at first, obscure.

2. In some cases the person is taken ill with high fever, giddiness, apoplectic or epileptic seizures, and becomes comatose. This form is very severe, but rare.

3. Generally the psychosal trouble comes on just at the end of the influenzal illness, not so frequently after two or three weeks have elapsed. Usually it is melancholic in character, though sometimes it is maniacal in form.

Some writers speak of three kinds of psychoses: (1) Depression, (2) maniacal excitement, (3) idiopathic psychoses coming out on the advent of the influenza. In all the influenzal psychoses three things should be kept in mind: the hopeful outlook, the tendency to suicide, and the liability to relapses. In the melancholia of influenza there seem to be mental pain, anxiety, anguish, and a "loss of the instinct of self-preservation." This may account for the tendency to suicide. There is a strong tendency in influenzal psychoses to become seized with the delu-

sions of persecution. In many of these cases of suicidal insanity after influenza there is a loss of feeling, and the person may severely wound himself without pain. This state of depression may be very obstinate and chronic, and is subject to relapses.

The prognosis in influenzal psychoses is good, whether they be of the melancholic, maniacal, or stuporous type; but a certain number do not recover. Males and females suffer about equally. Melancholia is more frequent than the other forms. Insanity may come on at any time up to eighteen months after the primary illness. On the whole, considering the duration of the mental disturbance, the tendency to relapse, the risk of suicide, moderate mortality, and the non-recovery of some, the influenzal psychoses must be regarded as serious complications.

The treatment is largely expectant and hygienic. The general health must be improved by every means possible. The patient must be guarded so as to obviate harming himself. Narcotics and sedatives should be avoided as far as possible. Good tonics, such as the glycerophosphates, sufficient diet, and perfect rest are called for in all cases. Relapses must be guarded against.

Mr. H. W. Lyle, Surgeon to the Royal Eye Hospital, Southwark, gives a short statement of the ocular diseases caused by influenza. Acute catarrhal conjunctivitis is one of the most common. It may involve both lids and the eyeball. There is often fear of light and lachrymation.

The superficial layers of the cornea may be involved in the condition of herpes. This may cause blepharo-spasm, and a free watery discharge.

The iris, ciliary body, and choroid are not often involved. But cases of iritis with hypopyon and purulent hyalitis have been reported. Glaucoma has resulted.

The lens is rarely involved. If senile cataract be present, an attack of influenza hastens the maturing of it.

Unilateral or bilateral papillitis sometimes occurs. Retro-bulbar optic neuritis have been observed. There may be consecutive atrophy. During such conditions there is marked amblyopia.

The ciliary muscles are sometimes affected, causing loss of accommodation. This is most likely in young persons with hypermetropia, or hypermetropic astigmatism. Many persons nearing the age of presbyopia now require glasses, as the result of lost accommodation from influenza.

The external muscles of the eyes may be involved or their nerve supply, rendering the various ocular movements difficult. There may be strabismus or ptosis.

Exophthalmos has been observed as the result of purulent inflammation of the frontal and ethmoidal sinuses.

Mr. Arthur H. Cheatle, Aural Surgeon, King's College Hospital, in speaking of the ear complications of influenza, remarks that they may be of the internal or external ear. In the internal the infection travels along the Eustachian tube. There may be an acute or chronic catarrhal condition of the middle ear. When the condition is one of a purulent nature the attack is usually very severe and the pain extreme. The pus may follow the usual course into the mastoid cells, down into the digastric fossa, beneath the skin over the mastoid process, or along the meatus in front.

The internal ear may become involved, giving rise to giddiness, tinnitus, deafness and vomiting. There may be caries of the bones. The nerves may also be affected, and there result facial paralysis and loss of taste.

When there are indications of inflammation of the auditory nerves, such as giddiness, tinnitus, and deafness in one ear, and diminished tone conduction, the treatment called for is rest in bed, packing the ear, purging with calomel, blistering behind the ear, and the administration of bromides.

Dr. W. D'Este Emery, Pathologist to the Children's Hospital, gives an interesting account of the micro-organisms of influenza. This is now recognized as caused by the bacillus influenzae, or Pfeiffer's bacillus. This organism is an aerobe, and will culture along with other organisms, as the diphtheria bacillus and the staphylococcus.

Many of the complications of influenza are due to the presence of other organisms, as the pneumococcus, the streptococcus, the staphylococcus, etc. The micrococcus catarrhalis is a frequent companion of that of influenza.

Among the organisms having a resemblance to the bacillus influenzae may be mentioned that of whooping cough, that found in epidemic conjunctivitis, the micrococcus catarrhalis. This latter is a very important organism in all forms of acute catarrhal inflammations of the mucous membranes. It would appear that influenza is not solely a specific disease caused by one germ only, but rather a group of allied bacillary affections.

The *Practitioner* sums up the treatment thus:—

As soon as it is recognized that a patient is suffering from influenza, isolation should be insisted upon at once, and young children and old persons should be guarded against all possible source of infection; the latter being especially liable to serious complications and sequelæ. The patient should be at once ordered to a warm bed, be rigidly confined there, and kept quiet until the temperature becomes normal, and from the very first the sick room should be thoroughly well ventilated. Dr.

J. F. Goodhart says, "To go to bed, to take plenty of light liquid nourishment, and some liquor ammonii acetatis every few hours, are sufficient, in most cases, to induce quick recovery." It is safest to thoroughly disinfect any secretion which may come from the nose and the bronchial tubes, and this may best be done by the use of carbolic acid, one part in twenty. The mouth and nose should be systematically and frequently disinfected by antiseptic inhalations, such as oil of eucalyptus or thymol, sprays and washes.

Sir J. W. Moore recommends the local use of quinine and resorcin. A good antiseptic gargle may be made by suspending one grain of sulphate of quinine in a wineglassful of cold water. The following is a useful mouth and nasal spray :—

R Resorcin	gr. lxxx.
Glycerini	ss.
Aq. Rosæ	ʒviiss.

Misce.

At the outset, the bowels should be opened by a saline purge, such as the effervescing citrate of magnesia or sulphate of soda, or a small dose of calomel, and at night five to ten grains of Dover's powder may be prescribed, and a draught consisting of the following :—

R Salicini	gr. xij.
Liquoris Ammonii Acetatis	ʒiv.
Aq. Camphoræ	ad ʒi.

Ft. Haust.

The patient should be given a supporting diet at first, milk and "egg albumin water;" the latter may be prepared by whipping up the whites of three or four eggs, to which may be added a pint of cold water and some cinnamon as a flavoring agent. Egg-flip may be given later. If a stimulant is required, white wine whey may be used with equal parts of unflavored egg albumin water. Beef-tea and chicken-broth may be also given separately, or mixed in equal quantities. Later, eggs and chicken, sweetbreads, fish, and finally roast joints, but, as Sir J. W. Moore reminds us, in attempting to draw up a bill of fare for a fastidious influenza patient, we should always remember that "what is one man's food is another man's poison." If the pulse is weak, stimulants are indicated; of these a good port wine and champagne are undoubtedly the best. During the course of the disease, special symptoms, which may be referred to either the *respiratory* or *gastro-intestinal tracts*, or the *central* or *peripheral nervous system*, may arise, and which, in either case, usually call for special medicinal treatment. Under these varying conditions, the following prescriptions may be found to benefit the patients :—

In the early stage of the disease, the following will be found useful :—

℞ Quininae Salicylatis.....	gr. xvi.
Acidi Nitrici Diluti.....	mxvi.
Tincturae Aurantii.....	i.
Syrupi Tolui.....	ss.
Aq. Dest.....	ad ℥viii.

Misce. Ft. Mist.

Two tablespoonfuls to be taken three times daily.

Dr. Burney Yeo says that the remedy, which is most deserving of confidence in the treatment of influenza, after two or three days of salicin treatment, is *quinine*. It seems to be really an anti-toxin in this disease. Professor J. Tessier, of Lyons, compares its action in influenza with that of sodium salicylate in acute rheumatism, and regards it as the most valuable medicine we possess for the treatment of it. If the treatment by quinine is persevered with, there will be much less cardiac weakness, and fewer of the serious sequelæ which so frequently appear.

The best and most efficacious way of giving quinine will be found to be as follows :—

Dissolve from one to three grains of sulphate of quinine in ten to twenty grains of citric acid, and add the solution to a mixture of ammonium carbonate and potassium bicarbonate in sufficient quantity to rather more than neutralize the citric acid. This dose should be repeated every three or four hours. If profuse and exhausting sweatings occur in the afternoons or evenings, five grains more of quinine sulphate, dissolved in lemon-juice, should be administered about five p.m.

If, however, a patient is unable to take quinine, Packard recommends the following as an efficient substitute :—

℞ Strychninae Sulphatis.....	gr. ʒʒ.
Cinchonidinae Salicylatis.....	gr. ij.

Misce. Ft. pil.

One pill to be taken every four hours.

In order to relieve the bronchial catarrh, which so often troubles the patient, the following medicine will prove of service :—

℞ Ammonii Chloridi.....	ʒij.
Tincturae Sumbol.....	ʒvj.
Extract Glycyrrhizæ Liquidæ.....	ʒiv.
Spiritus Ammonia Aromatici.....	ʒiv.
Aq. Chloroform.....	ad ʒxij.

Misce. Ft. Mist.

Two tablespoonfuls to be taken three times daily.

Forchheimer states that the ordinary bronchitis is satisfactorily controlled by the following:—

℞ Sodii Benzoati ℥ij.
Aq. Menth. Pip. ℥iv.

Misce. Ft. Mist.

One tablespoonful to be given every two hours to an adult.

If the cough is hard and troublesome, with a scanty tenacious expectoration, the following may be prescribed:—

℞ Apomorphinæ Hydrochloridi gr. 1.
Morphinæ Hydrochloridi gr. ʒ.
Acidi Hydrochlorici Diluti ℥ss.
Syrupi Aurantii ℥iv.
Aq. ad ℥iv.

Misce. Ft. Mist.

One or two teaspoonfuls to be taken at a time for a dose.

Simson recommends the following mixture for the relief of the cough:—

℞ Liquoris Morphinæ Hydrochloridi ℥i.
Acidi Hydrobromici Diluti ℥i.
Chloroformi miiij.
Tincturæ Limonis ℥i.
Syrup ad ℥ixss.

Misce. Ft. Syrup.

A teaspoonful to be taken when necessary.

Sir William Whitla suggests the following medicine for the relief of influenzal pneumonia:—

℞ Ammonii Carbonatis ℥iv.
Tincturæ Cinchonæ ℥ixss.
Spiritus Ammoniæ Aromatici ℥iv.
Decoct. Cinchon. ad ℥xij.

Misce. Ft. Mist.

Two tablespoonfuls with a tablespoonful of lemon-juice in effervescence every four hours. At the same time, cardiac stimulants, such as brandy, strychnine, combined with digitalis and oxygen inhalations, are required.

It is well known that cardiac asthenia often appears during an attack of influenza, and often continues after the attack has passed off; it calls for special treatment. Prolonged rest in bed in a well-ventilated room, or, if the weather is warm, on a couch, in the open air is essential, and the following prescribed:—

℞ Quininæ Sulphatis gr. ʒxij.
Acidi Sulphurici Diluti miiij.
Tincturæ Ferri Perchloridi mv.
Tincturæ Nucis Vomiceæ mvi.
Magnesii Sulphatis gr. xx.
Inf. Quass. ad ℥i.

Misce. Ft. Mist.

Two tablespoonfuls to be taken three times daily.

For the severe gastric pain and vomiting, which sometimes occur during an attack of influenza, Huchard recommends the following mixture :—

℞ Sodii Bicarbonatis.....
Magnesiæ.....
Bismuthi Salicylatis.....aa gr. v.

Misce. Ft. Pulv.

Three to five powders to be taken daily.

Hydrocyanic acid should not be prescribed for the purpose of relieving vomiting, as it is somewhat depressing to the heart.

For the intense headache and pains in the limbs and back, Sir William Whitla prescribes antipyrine, 5 grains, with citrate of caffeine, 2½ grains to be taken at once, to be followed by half the dose, every hour for six or eight doses: this, he says, invariably gives speedy relief. One of the most troublesome symptoms of influenza is persistent and severe headache. This may be relieved by the following :—

℞ Phenazoni.....gr. x.
Caffeinæ.....gr. ij.
Spiritus Ammoniaë Aromatici.....ʒ ss.
Tincturæ Cardomomi Co.....ʒ ss.
Aq. Dest.....ad ʒ iiss.

Three tablespoonfuls to be taken when required.

If neuralgia is severe, the following draught may be prescribed :—

℞ Caffeinæ Citratis.....gr. i.
Phenacetin.....gr. vi.
Mucilaginis Acaciæ.....ʒ i.
Aq. Menthaë Piperitaë.....ad ʒ i.

Misce. Ft. Haust.

Or the following :—

℞ Phenazoni.....gr. xv.
Tincturæ Gelsemii.....mxx.
Aq. Chloroform.....ad ʒ ij.

Misce. Ft. Haustus.

One-fourth part to be taken every second or third hour until the pain ceases.

For the troublesome nasal catarrh, which frequently accompanies influenza; one of the following remedies may be used :—

℞ Acidi Borici.....gr. xxv.
Menthol.....gr. xxx.
Bismuthi Oxylchloridi.....gr. xxv.
Lycopodii.....ʒ iv.

Misce. The snuff to be used frequently.

Or,—

℞ Menthol.....ʒ i.
Paraffini Liquidi.....ad ʒ i.

Misce.

This may be locally applied into each nostril with a good camel-hair brush.

For use during convalescence, Sir J. W. Moore recommends the following :—

℞	Liquoris Strychninæ Hydrochloridi.....	ʒ ss.
	Acidi Hydrochlorici Diluti.....	ʒ iiss.
	Tincturæ Aurantii.....	ʒ vi.
	Aq. Chloroformi.....	ʒ vii.

Misce. Ft. Mist.

One-eighth part to be taken twice or thrice a day, with or after meals.

Or,

℞	Liquoris Strychninæ Hydrochloridi.....	ʒ ss.
	Acidi Phosphorici Diluti.....	ʒ iiss.
	Tincturæ Quininæ.....	ʒ vi.
	Aq. Chloroformi.....	ʒ vii.

Misce. Ft. Mist.

One-eighth part to be taken twice daily.

Sir J. W. Moore suggests that it is advisable to interrupt the taking of either of the above mixtures for a few days, should they cause headaches or spasmodic pains, due to the accumulation of strychnine.

INJECTIONS OF ALCOHOL IN NEURALGIA.

Dr. Louis Hauck, writing in the *St. Louis Medical Review*, for December, 1906, refers to the method of treating neuralgia by the injection of alcohol, as advised by Dr. Schlæsser.

The method pursued was to inject from ten to thirty minims of 50 per cent. alcohol into the nerves where they leave the skull. This is done by means of specially constructed needles.

From what I have seen and heard it seems to me that the removal of the Gasserian ganglion is an unwarranted and unnecessary operation. It also goes far towards proving that the seat of disease lies not in the ganglion, but in the nerves.

Drs. Mayo, of Rochester, assured me that they seldom found it necessary to remove the ganglion and now operated by plugging the foramina to obstruct the reunion of the nerves.

Dr. Ferguson, of Chicago, I am told, is using hot saline solution in place of alcohol. Osmic acid has been tried, but relapses have been the rule within a short time.

Ether, carbolic acid, cocaine, chloroform, etc., have all been tried and discarded. The injections of 80 per cent. alcohol can be as successfully used in sciatica and other forms of neuralgia.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Windsor Mills, Quebec.

Typhoid fever is very prevalent in Montreal and the surrounding municipalities. There are thought to be about one thousand cases in the whole district. In the hospitals the number of cases is increasing and in some of the institutions, such as the Western General, they are obliged to turn cases away. At the Royal Victoria the spare wards are being utilized until the outbreak is past the worst. The following cases have been reported: Notre Dame Hospital, 19 cases; Western, 12; General, 32; Royal Victoria, 63. Nurses are almost impossible to be had, and all are working overtime. The Victorian Order could easily be doubled and yet find work in abundance.

During the month of November the cases recorded in the hospitals numbered 40, while in December the number rose to 108. It is rather curious to note that the seventeen wards supplied by city water had 16 cases in November and 40 in December, while St. Henri, Ste. Cunegonde and St. Denis, which are served with water from other sources, had 16 cases in November and 47 in December.

The Health Committee has issued notices recommending that all water should be boiled when used for drinking purposes, and this precaution is being taken throughout the city among the majority of the people, although, as has been pointed out, the day schools have not as yet made any steps in this direction.

The Provincial Board of Health has reaffirmed the conclusions arrived at during the epidemic of 1903-4, namely, that the water supplied by the Montreal Water and Power Co. was not above suspicion, and therefore it was resolved to notify the municipalities wholly or partially supplied with the said water, to see that the measures recommended by the Provincial Board in 1904 for the improvement of the said water supply be carried out forthwith. As some physicians do not report their cases of typhoid the municipalities will be notified to strictly apply the law by taking proceedings against delinquent physicians, and prosecutions will be taken against three municipalities which have neglected to report their cases to the Provincial Board.

In relation to the prevalence of typhoid fever in the various wards of the city, it is interesting to note the distribution of the various contagious diseases which occurred in the different districts.

St. Henri leads the list in regard to typhoid, there being 155 reported. St. Denis is next with 64, and Ste. Cunegonde third with 56. As previously mentioned, none of these are supplied with city water.

In St. Ann's ward there were the most cases of diphtheria, the number being 70. St. Louis comes next with 67 cases.

St. Ann's ward also holds the record for scarlet fever with 37, St. Gabriel being second with 23 cases.

Of measles, 166 cases were found in St. Lawrence ward, while 164 were reported in St. Gabriel.

St. Louis ward led in tuberculosis with 101, Papineau being second with 88.

Altogether, there were during the year 674 cases of diphtheria in Montreal, 210 of scarlet fever, 792 of typhoid, 1,251 of measles, 143 of German measles, 93 of chicken-pox, 261 of whooping cough, 949 of tuberculosis, 36 of erysipelas, 5 of spinal meningitis, 5 of smallpox, 1 of malaria.

At length an article, short, it is true, has appeared in the daily press, stating in a very mild way that the hospitals are being misused by those who are not poor. It cites as examples ladies in silks and furs who drive up to the hospital in cabs and receive free treatment and free medicine. The Outdoor Department of the Montreal General Hospital is the one stated to be the most abused of the charity departments of the Montreal hospitals. The article goes on to show that the Montreal General, as an institution supported by public subscription, cannot afford to give free treatment to the undeserving, and mentions also that it is not fair that the leading lights in the profession should spend their time and skill upon trivial cases which should be bringing bread and butter to the underpaid general practitioner. It is to be regretted that the problem was not attacked and an attempt at a solution made at the same time that the article was written.

This problem of hospital charity must have claimed the attention of everyone from the second year student to the chief of the attending staff. That hospitals are abused can be proved by any superficial observer upon any day of the week and any time of the day.

At the Royal Victoria Hospital patients have been seen driving up in cabs, ordering them to wait for the hour or two necessary, and then returning home in them. Patients dressed in vastly better clothing than the doctors attending them may be seen every day in any of the hospitals waiting their turn. The specialists' departments are those most sought after, as an opinion may be had and treatment given by an expert for nothing which in the ordinary course of events would cost from five to ten dollars a visit.

The general public says: "Why do you not turn that class out?" The answer is that we occasionally do it, but that in the ordinary course of events the doctor is investigating a case, not a candidate for charity. It is not his place, nor has he the time to do so. Further, he cares but little as a rule as long as he has a large clinic and can show endless material to the students. It is a great thing to be able to show over forty thousand cases to students during a year, and this is the outdoor record of institutions like the Montreal General and Royal Victoria Hospitals. Besides, it looks well in the annual reports. Certainly the hospitals are to blame in some respects. How, then, weed out the sheep from the goats? It must be allowed that, first of all, every emergency case must be admitted without distinction. Secondly, that cases ill enough to be admitted to the wards should be allowed in at once and the case investigated later. The vast majority of outdoor cases, however, are left out of these two classes. These patients are able to walk about and are not too ill to wait for hours before their turn comes to be examined. This, then, is the great mass whose means must be investigated. Compel each one to bring a certificate from the charity organization of the city before letting them into the hospital outdoor. This would seem a rather large contract for the charity organization, and so it is, for a special force would have to be held for this work and no other; a special grant would have to be made by the hospitals—they could afford it after their work was once cut down by half; and assistance would be expected from all engaged in charitable work of all sorts. The prospective patients could then hand in their names, addresses, and references, including their clergyman and physician. These could be referred to a certificate which must be presented at the hospital and handed over to those eligible. At first the labor would be very great, but later it would become much simplified as the people learned that such investigation was necessary and provided themselves with references. The details of this scheme would have to be worked out and it is not by any means perfect, but as the charity organization of Montreal has for a number of years handled the people who require hospital charity so skilfully it would appear that no other body could possibly carry on this work with the same hope of success. It has further offered to investigate cases in which there is doubt, and some extension of the work would include all the cases as above suggested.

There is one more point to which attention should be drawn, and that is the position of the general practitioner who recommends for admission to the public wards those capable of paying for private accommodation. As a rule, this abuse is found in cases requiring operative interference, which cannot be undertaken with the best results except in a hospital. The practitioner knows that the case is to be taken out of

his hands, and, in order to do the patient a favor, says that he will see that he gets into the hospital without it costing him anything. Here the question of high fees for operation comes in, as there are many who would gladly pay either a hundred dollars for the operation or two dollars and a half a day for a private room, but who feel unable to pay both, and here a paying public ward patient is probably the only solution, but we too often see the point stretched in favor of the patient and the surgeon loses his fee.

A better conscience among all classes is of course a utopian solution of the problem, but the reference givers must be the first to show improvement and then there is a possibility that a scheme similar to what has been suggested will prove successful.

The Montreal Medico-Chirurgical Society, at its sixth regular meeting, was given a lecture, illustrated by lantern slides, upon "Medical Instruction in Germany and France," by Eug. St. Jacques. Other papers read during the month were: How to Improve our Milk Supply, by Dr. Laberge; Portal Thrombosis of Liver, and Multiple Ulceration of Stomach, by Drs. Adami and Archibald; Bicuspid Aortic Valve, by Dr. John McCrae; Embolism of Heart, by Dr. Little; Miliary Tuberculosis of Choroid in two cases, by Dr. Mathewson; and Three Cases of Purulent Conjunctivitis with different Etiological Factors, by Dr. McKee.

During the past year at the General Hospital 50,441 were treated; of these 3,459 were admitted to the wards and 46,982 were examined in the outdoor department, an increase of 227 in the indoor and 2,466 in the outdoor departments.

During the month of December 279 patients were admitted to the wards; there were 27 deaths. Outdoor consultations numbered 3,577. The ambulance made 171 runs in response to calls.

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CURRENT MEDICAL LITERATURE

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MEDICINE.Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.
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THE TREATMENT OF PSORIASIS.

Dr. L. Duncan Bulkley concludes his article on psoriasis thus in the *Jour. A. M. A.* for November 17, 1906:—

1. Psoriasis is not a purely local disease of the skin, but has constitutional relations which are most important.
2. Psoriasis is not a parasitic disease of the skin, in the usual acceptation of the term; it is not contagious, nor has it a definite micro-organism. But probably the immediate lesions on the skin are caused by the growth of some of the ordinary micro-organisms usually found on the skin, which take on a pathogenetic action when the soil is suitable.
3. Psoriasis can not be cured permanently by local treatment alone, although when properly directed this is commonly capable of removing existing lesions, which are likely to return.
4. In some instances in which local treatment seems to be followed by success, the eruption may be seborrheic dermatitis, which in some of its phases closely resembles psoriasis.
5. Hereditary influence is a relatively unimportant factor, not operative in more than one-quarter of all cases; even in many of these instances but one child may be affected among many healthy children.
6. Psoriasis is not a late manifestation of syphilis.
7. There is no one tangible internal cause of psoriasis, though faulty metabolic changes are probably at the bottom of every case, and these may be induced in many ways.
8. The repeated and thorough volumetric analysis of the urine is a most valuable aid in determining the line of proper treatment in different cases, and at different times.
9. There is no internal remedy universally of value in psoriasis, although arsenic is the single agent of most service in the greater number of instances. Arsenic is safe, if properly used, and may be taken for a long time with only beneficial results: but it commonly requires to be employed in conjunction with other internal measures or alternated with them. In acutely developing psoriasis it often acts badly, increasing the eruption.
10. In a large share of cases alkalis, if properly used, are of the greatest value in psoriasis.

11. The avoidance of meat, or an absolutely vegetarian diet. is a most valuable aid in treatment, and sometimes will be attended with freedom from the eruption.

12. Psoriasis is an exceedingly chronic and rebellious disease and effective internal measures must be continued for a long time, generally for at least two years, to ensure a cure.

13. Local treatment is of the greatest value in the removal of the eruption present, but its temporary success should not interfere with the persistence in proper internal measures for a length of time, even when no eruption exists. The eruption can also disappear under the strictest proper internal treatment, without the aid of any local measures.

14. The x-ray is a most valuable adjunct to local therapeutics, and is sometimes capable of removing chronic lesions even by means of a single application.

VACCINATION AND ANTIVACCINATION.

Dr. Joseph McFarland, the well-known pathologist, states the case regarding vaccination and the opposition to it as follows in the October issue of the *Monthly Cyclopædia of Practical Medicine* :—

I will give you, however, the main arguments of the antivaccinationists. They assert that :—

1. Statistics prove that vaccination has not, does not, and never will diminish the incidence of small-pox. Answer that, if you can.

2. Vaccinia and small-pox are one and the same thing, the latter in its contagious, the former in its non-contagious form.

3. Great-pox and small-pox are identical.

4. Everyone who is vaccinated is syphilized.

5. The fact that seven-eighths of the population of the United States have been syphilized by vaccination explains the now-progressing rapid degeneration of the Anglo-Saxon—*i.e.*, American people.

7. More people are directly and indirectly killed and maimed by vaccination than were ever injured by small-pox.

Now, if you think you can argue these points to any successful issue, you may then take up the great legal point :—

8. Compulsory vaccination is tyranny, and therefore unconstitutional, and opposed to the fundamental principles of the American Government.

I might add other arguments that should be met with other answers than mere denials.

9. Compulsory vaccination is recommended by the doctors in order that they may reap the pecuniary benefits.

10. It is urged by boards of health at the instigation of political doctor-grafters who seek the small fee that the operation brings on.

11. Compulsory vaccination legislation is the result of successful lobbying by manufacturers of vaccine virus and by "political doctors" holding high-salaried offices that would have little to do if vaccination were taken out of their hands.

12. The general sentiment of the people of the country is against vaccination as being doubtfully useful and undoubtedly dangerous, and is opposed to legislation that imposes upon their constitutional rights.

Here are the points you asked for. They may not be just what you want, but their answer is what the antis want. You see they are specious arguments, that all bear a strong resemblance to truth, because behind each of them there is enough truth to make it awkward to controvert them. In lecturing upon the subject I usually go at it in this way:—

Prior to 1800 small-pox was one of the most common of diseases. Everybody expected to have it, and few men or women escaped. Literature is full of references to its destructive effects upon the beauty, vision, health, and life of the day. Thackeray's Henry Esmond is a good book to refer to.

About 1800, Jenner and his contemporaries introduced vaccination in the face of every kind of medical, religious, and secular opposition. Its advantages, however, were so obvious in the beginning that the prejudices were easily overcome.

When small-pox was so universal, the lower animals suffered constantly from cow-pox, sheep-pox, swine-pox, horse-pox, etc., all of which disappeared as small-pox became rare.

Jenner's work was empirical and demonstrative. His scientific premises—as, for example, that vaccinia had its origin in "grease" of horses—were wrong; but, despite this, he discovered and demonstrated a new fundamental truth. Columbus was wrong when he thought he could sail across the Atlantic Ocean to India; he was still wrong when he discovered America and thought it to be India; but notwithstanding that, he made the greatest of all geographical discoveries. So Jenner's foundations were in error, yet he made one of the greatest medical discoveries.

The relation of vaccinia to small-pox seems entirely clear; Vaccinia is variola of the cow. The virus, virulent in man, is attenuated in the cow.

The successful infection of vaccinia into man is followed by immunity against the virulent organism of small-pox. These two principles are in perfect harmony with the general principles of immunity.

It is not the *operation* of vaccination, but the *infection* following it, that secures the immunity.

Vaccination is done for the purpose of making a person slightly ill, in order that he may not become seriously ill. *Ergo*, vaccinia is an illness.

Vaccinia sometimes, but rarely, runs an irregular course. In this it corresponds to all acute diseases.

It is sometimes so mild that no beneficial effect results from it.

It is sometimes itself a serious illness.

It is never contagious—rarely disfiguring.

Contrast this with small-pox:—

It is always contagious.

It is always disfiguring.

It is commonly dangerous.

It is commonly fatal.

Vaccination-scars are the best index we have of the fact that one is exempt from small-pox, but are not infallible. They only show that one has been operated upon. The typical scar usually guarantees that one has had vaccinia. Having had vaccinia usually guarantees exemption from small-pox, but none of these things follow of necessity.

Vaccination sometimes fails to take. This is inevitable—

1. Some persons are naturally immune to both small-pox and vaccinia.
2. The operation may not have been properly performed.
3. The virus may have been so old, or so poor, that it contained none of the essential organisms of the disease.
4. The use of antiseptics may have destroyed the essential organisms.

In all these cases, though the individual has been vaccinated, he has not had resulting vaccinia, and so is not benefited by the operation, the purpose of which is to cause disease.

Vaccination sometimes results in unexpected derangements.

1. Some individuals are so susceptible that they become unusually ill, and may even suffer from a generalization of the disease resembling small-pox, but not dangerous and not contagious.

2. Virus taken from human beings may contain other microorganisms virulent for other human beings—syphilis, erysipelas, etc.

3. Virus taken from calves, and hence not possibly containing such organisms, may still contain a few accidental dangerous organisms from

the soil, air, dust, intestinal worms, etc.—tetanus bacilli, staphylococci, etc. Evil results from this cause are very rare, because all viruses are now tested for the exclusion of such organisms.

4. Pure virus may be implanted in a careless manner by which microorganisms on the arm—skin—may be subsequently rubbed in, or later, when itching begins, such organisms may be carried in by the child's finger-nails.

The cases of osteo-sarcoma, emaciation, tuberculosis, and other dreadful conditions pictured in the literature of the antivaccinationists are coincidental, and have nothing whatever to do with one another.

CHLOROFORM IN THE BLOOD AND TISSUES.

The *British Medical Journal*, Dec. 22nd, gives the paper by Nicloux of Paris on this subject. A method of distillation was devised by which an accurate estimation could be made, and experiments were made on animals; in dogs it was found that the proportion of chloroform in the blood causing the beginning of anæsthesia was 30 to 40 m.g. per 100 c.c.m.; the quantity which produced absolute anæsthesia was 40 to 50 m.g.; the quantity which caused death was 60 to 70 m.g. Thus the difference between the anæsthetic dose and the lethal is relatively small.

In all the tissues at death there is a very notable proportion of chloroform—thus where at death the blood showed 70 m.g. in 100 g.m. there was found in—

Liver	50.5 m.g. in 100 grams.
Kidneys	46.5 " "
Spleen	38 " "
Muscle	21.5 " "
Heart	41 " "
Brain	55.5 " "
Bulb	85 " "
Spinal cord	83 " "

It is to be noted that of all, the bulb and spinal cord contain the most; and likewise fatty tissues take up more than any other; as much as 132 has been found in the peri-renal fat.

In the blood, the corpuscles hold seven or eight times as much as the plasma. In experiments on guinea pigs chloroform was found in the fœtus in a deep anæsthesia which caused death in two minutes; the proportion in the fœtal liver was greater than in the maternal, due, it is believed, to the preponderance of lecithin in the fœtal liver. By experiment on goats the amount in milk was determined; at the beginning it

was less than in the blood, 12 m.g.; in fifteen minutes they were equal, 26 m.g.; after forty-five minutes the amount in the milk was 60 m.g. as against 37.5 in the blood. It disappears slowly in the blood and the milk; at three hours after the amount was 7 m.g. and 9 m.g. respectively. The election of chloroform for fatty substances explains the affinity for milk.

SURGERY.

Under the charge of H. A. BEATTY, M.B., M.R.C.S., Eng., Surgeon Toronto Western Hospital :
Consulting Surgeon Toronto Orthopedic Hospital; and Chief Surgeon Ontario
Division, Canadian Pacific Railway.

A RATIONAL METHOD OF REDUCING A RECENT DISLOCATION OF THE SHOULDER-JOINT.

In the *International Journal of Surgery*, Nov., 1906, E. Clifford Chipman describes a method for the reduction of shoulder dislocations, for which he claims advantages in ease and efficiency over most of the established methods, and which will be found to be of especial value when the surgeon is without an assistant. The author describes the method as follows:—

Stand facing your patient. Gradually raise the dislocated arm to a horizontal position and place it on your shoulder with forearm flexed on your back. Direct the patient to pass his well arm under your arm and grasp the wrist of the injured arm with the well hand. Thus the patient completely encircles your body, the injured arm on your shoulder, the well arm under your opposite arm, the well hand grasping the injured wrist. Now, direct patient to sag downward.

The weight of the body drags the head of humerus outward and upward, and places it where you can easily return it to the glenoid cavity with your hands.

The dislocation is so easily and expeditiously reduced that even the surgeon himself is surprised. With this method, there is the least possible injury to the already injured parts; there is the least possible pain to your patient; there is no need of an assistant; there is no need of an anæsthetic; the patient's mind is entirely taken up with assisting you, hence there is no muscular resistance; his body furnishes the power by its weight to place the head of the humerus where it can be easily pressed into place, thus doing away with the necessity of pulleys and other mechanical appliances; and the position of the arm is as near the position it was when the dislocation took place as possible. This is where it should be before you try to reduce the dislocation.

GONORRHOEAL OPHTHALMIA IN CHILDREN.

In the *American Journal of Surgery*, Nov., 1906, Charles H. May presents a paper with the above title. He complains that while ophthalmia neonatorum and gonorrhoeal ophthalmia of the adult find considerable prominence in discussions and in our leading text-books, there seems to be no recognition of the affection in children (excluding in this term the new-born).

The disease is met with in children but is not of common occurrence, which is somewhat remarkable since recent investigations have shown that gonococcus vaginitis is quite frequent in female children.

The writer closes his paper by emphasizing the following points: (1) Virulent examples of gonococcus conjunctivitis in children are of uncommon occurrence. (2) The disease may occur with the same alarming symptoms that characterize the affection in the new-born and in the adult, but usually it has a much milder course. (3) A mild type of the affection is probably of much more common occurrence than clinical observation leads us to believe; this can only be determined with certainty by more frequent microscopical examinations of the smear from the discharge in all cases of conjunctivitis. (4) Since we can never determine in any case how severe such conjunctivitis may become, it is advisable to warn those who have the care of children against the contagiousness of the discharge from every case of vaginitis, and of the danger of the transference of the contagious principle directly or indirectly through fingers, wash-rags, sponges, and the bath.

THE SURGICAL TREATMENT OF TRIGEMINAL NEURALGIA.

In the *Medical Record*, Sept. 29, 1906, A. V. Moschcowitz reviews the evolution of the surgical treatment of trigeminal neuralgia and finds that every operation that has thus far been devised is attended by recurrences.

The recurrence in every case has been due to regeneration of the nerve. The Hartly-Krause operation gives the best post-operative results as far as recurrences are concerned, but is attended by a fearful mortality. In order to obviate the possibility of regeneration, Moschcowitz has devised the plan of merely performing peripheral operations, dividing the affected nerve and plugging the foramen with a gold or silver button or wire.

More specifically, the author offers the following conclusions:—

1. Eliminate any possible etiological factors, such as tumors, carious teeth, antral disease, malaria, syphilis, etc.
2. Determine accurately the nerve branch or branches involved.

3. The operation should be performed as near to the periphery as possible.

4. The operation should be performed early. This is important, because the earlier the case the more chances there are that a peripheral operation will be of benefit.

5. Whatever the character of the operation may be, the dominant principle must be the *prevention of regeneration* of the affected nerve. More specifically, the operations may be classed under two headings, depending on the nerve or nerves affected :

(a) Peripheral operations. If the supraorbital, infraorbital, mental, molar, or inferior dental branches, either singly or collectively, are involved, the operation consists in division of the nerve, and plugging up of the foramen by a gold or silver button or wire.

(b) Central operations. If the neuralgia involves the upper teeth and palate (superior maxillary division) or tongue (inferior maxillary division), existing either singly or together with the other nerves described above, the operation as outlined by Abbe must always be performed, substituting, however, celluloid or a gold button, instead of rubber tissue.

6. Finally, if the above principles of treatment of trigeminal neuralgia are carried out, the operation of extirpation of the Gasserian ganglion will become entirely unnecessary.—*American Journal of Surgery*.

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITER.

While surgery is admittedly contraindicated in many cases of exophthalmic goiter, F. J. Shepherd, Montreal (*Journal A. M. A.*, Sept. 1), maintains that in a certain proportion operative measures are curative or lead to decided improvement. The probable cause is hyperactivity of the thyroid, but the part played by the thymus and other causes in this disease complex can not be entirely ignored. Shepherd thinks that early operation is safest and that the class of cases most likely to be benefited are not the most severe ones, but those in which the gland is more enlarged on one side than on the other, with more definite tumor formation, and in which the gland is not excessively vascular and the enlargement has preceded the symptoms by years. In those early cases of enlarged thyroid with mild symptoms in which the gland is soft, vascular and evenly enlarged throughout, the results of operation are usually good. With large vascular thyroid and symptoms of marked toxemia from thyroidism operations should be avoided. He notes the disinclination of most physicians to operate and gives statistics from various operators showing good after-effects and low mortality. Nor does he consider general anesthesia as specially dangerous in selected cases.

Fourteen cases of his own and three of certain of his colleagues are reported. There were three deaths, all in desperate cases, nine complete cures, three patients were much improved, one relapsed and one has been lost sight of though improvement followed operation. Sixteen of the patients were females. In all, the operation was called for on account of distressing symptoms. The diagnosis were clinical. He does not believe the pathology of the disease is sufficiently definite to make the microscopic examination of first importance.

THE BACTERICIDAL POWER OF SILVER PREPARATIONS.

In the *Boston Medical and Surgical Journal*, Sept. 29th, G. S. Derby compares the bactericidal power of nitrate of silver and some of the new silver preparations for which so much has been claimed. The preparations tested were purchased in original bottles from reputable wholesale firms. The *Staphylococcus aureus* was utilized for the work. The following silver preparations were tested: nitrate of silver, argyrol, protargol, collargol, largin, ichthargan, albargin, argonin and argentamin. Solutions of nitrate of silver varying in strength from 0.5 per cent. to 2 per cent. killed the *Staphylococcus aureus* in from two to five minutes. An exposure of 30 seconds to the 0.5 per cent. solution was generally sufficient to prevent a growth in 24 hours, but not sufficient to kill all the cocci. The bactericidal action of protargol is efficient, though not so efficient as that of nitrate of silver. The micro-organism is usually killed by a 2 per cent. or a 4 per cent. solution at the end of from three to five minutes, though occasionally a few colonies will grow after ten minutes' exposure. An exposure of one minute will usually prevent a growth of the germ in 24 hours. Solutions of the same strength will kill the pneumococcus in one minute. The bactericidal power of collargol is comparatively weak, as a growth of the *Staphylococcus aureus* could be obtained at the end of 20 minutes, using the 4 per cent. solution. With a 1 per cent. solution a growth was obtained at the end of one hour. Albargin in 10 per cent. and 20 per cent. solutions killed the *Staphylococcus aureus* in from two to five minutes. The 1 per cent. solution gave a growth after 15 minutes' exposure. In ichthargan solutions varying in strength from 1/10 per cent. to 1 per cent., there was no growth after from one to four minutes. With argentamin, ethylenediamine-silver nitrate, practically the same results were obtained with a 5 per cent. solution of this drug as with ichthargan. Largin, silver protalbin, is an efficient bactericide. The *Staphylococcus aureus* was killed by a 10 per cent. solution in from two to five minutes. With argonin, argentum

casein, no growth could be demonstrated after from three to six minutes. The bactericidal power of argyrol is exceedingly weak. In a large series of observations a growth of the *Staphylococcus aureus* was obtained after exposure to the 10 per cent., 25 per cent. and 50 per cent. solutions for one hour, one hour and two hours respectively. A diminution in the number of colonies commonly appeared at the end of 20 minutes. Its action was uncertain, and while occasionally the germs were affected by a 20-minute exposure, more often the cultures taken at the end of one hour showed a growth when examined 24 hours later. The age of the solution did not appear to be of importance.—*J. A. M. A.*, Oct. 13th.

INFLUENCE EXERTED ON THE VIRULENCE OF CARCINOMA IN MICE BY SUBJECTING THE TUMOR MATERIALS TO INCUBATION PREVIOUS TO INOCULATION.

In the *Journal of Experimental Medicine*, August, Clowes and Baeslack state that their experience with mouse tumors has demonstrated that a great difference exists not only in the relative immunity possessed by different individuals, but also in the relative virulence of different tumors all owing their origin to the same source. The variations in question can be accentuated by incubation of the transplantation materials previous to inoculation at temperatures varying from 37 to 41°C. In the case of extremely virulent tumors giving a yield of over 60 per cent. under normal conditions, a distinct and gradual fall in virulence accompanies increasing temperatures of incubation until a point is reached at which no further tumors are obtained. On the other hand, relatively inactive materials giving comparatively small yields of tumors under normal conditions may be so stimulated by subjecting them to incubation at suitable temperatures as to afford a large yield and relatively more rapidly growing tumors than were obtained in the normal series. Those tumors which give a small yield under normal conditions, but which give an increased yield on incubation, are either rapidly growing young tumors, or small and hard tumors, or tumors that have been extremely slow in their development, and have in certain cases exhibited indications of a tendency to undergo spontaneous recovery. Those tumors which on inoculation give a large yield at normal temperatures and a gradually decreasing percentage of tumors in the batches inoculated with materials which have been incubated at increasing temperatures are generally fully grown tumors which have developed rapidly and come of a relatively active strain.

SILVER NITRATE AND ZINC IN CHRONIC GONORRHOEA.

In the *Annales d. Mal. d. Org. Gén.-Urin.*, Paris, Balzer and Tansard report 13 cases treated with nitrate of silver and zinc, the action of the zinc decomposing the silver nitrate. There is thus a production of silver albuminate and of silver chlorid which are deposited on the mucosa lining the urethra. There is, further, a formation of metallic silver, also of traces of zinc chlorid, and, finally, of zinc nitrate, which is the most effectual factor of all in the treatment. To obtain this combined local action they instil ten to twenty drops of a one per cent. solution of nitrate of silver. Immediately afterward they insert a catheter made of metallic zinc, about 32 or 40 in the Bénéqué series. The zinc catheter is held in the urethra for a minute or two, until the chemical reaction becomes evident by the pain experienced and by the black discoloration of the vaselin with which the catheter is lubricated. In two minutes this black stain shows that the silver-zinc reaction has occurred, and the catheter is then withdrawn. The catheter should be boiled beforehand in distilled water and cleaned at once after removal. They rub it with potassium iodid until it has resumed its usual color. It loses its polish soon and has to be sent to be repolished occasionally. The efficacy of this combined treatment is established by the cases reported. They affirm seven applications cured the first patient, nine the second and third, five the fourth, and so on, all cases of rebellious chronic gonorrhœa in males. The method is probably equally applicable for girls and women in vaginitis and metritis.

GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynecologist Toronto Western Hospital, and Consulting Surgeon Toronto Orthopedic Hospital.

THE GILLIAM OPERATION FOR DEVIATIONS OF THE UTERUS.

In the *International Journal of Surgery*, Nov., 1906, D. Tod Gilliam gives a description of the operation which bears his name. The author has from time to time made several changes in the technics of the operation, but as he performs it now the operation is as follows:-

- (1) An abdominal incision three or four inches in length is made in the median line at the usual site between the umbilicus and pubes.
- (2) The adhesions are broken up and the fundus brought forward.
- (3) By lifting up the broad ligament of one side on the tip of a finger applied to the posterior surface, the round ligament is brought into view and is picked up with a bullet forceps.

(4) Selecting a point an inch and a half from the uterus, a thread is passed under the round ligament, and the ends of the thread are brought out of the opening and secured in the bite of a clamp forceps, which is laid on the surface of the abdomen.

(5) The other ligament is sought for and secured in the same manner.

(6) At a point about one inch and a half above the pubes, the peritoneum, muscle and fascia are caught up by a volsella and pinned together, being careful that the edges of these layers are in line.

(7) Traction is now made, and with a claw retractor the skin and superficial fat are drawn in the opposite direction, and by a sweep of the knife the face of the fascia is laid bare.

(8) With a narrow-bladed knife, or better, with a Cleveland ligature carrier or some similar instrument, a stab wound is made from the surface of the fascia into the peritoneal cavity, one inch from the edge of the abdominal incision. If the ligature carrier is used the jaws are separated, and by an outward movement of the handle brought into plain view at the large opening.

The thread which loops the round ligament is now placed in the jaws, the clamp forceps removed and the ligature carrier withdrawn, bringing with it the thread and the ligament. If a knife has been used to make the perforation, it is withdrawn and a slender forceps introduced, with which the thread is caught up and the ligament drawn into place.

(9) Now, while the ligament is held taut, with its loop end just above the surface of the fascia, a catgut suture is passed through it, including the tissues on either side, and back again, where it is tied. This is cut close to the knot, the suspending thread cut on one side close to the ligament and withdrawn, and the volsella and retractor removed.

(10) The other side is dealt with in like manner and the abdominal incision closed.

After both ligaments have been fastened it will be observed that an opening exists between the uterus and abdominal wall of from seven to nine inches in circumference, and that the two openings on the distal side of the loop will readily admit two and sometimes three fingers and are soft, yielding and distensible—conditions under which strangulation of the bowel would hardly be conceivable. It will be observed that the uterus is not suspended, but rests easily and naturally on the bladder, from which it can be raised to a position little short of the vertical. Thus the uterus is enabled to conform to the altered conditions of the bladder, rectum and the various bodily movements. Should pregnancy ensue, the ligaments develop *pari passu* with the growth of the uterus, and there is neither embarrassment in gestation nor difficulty in parturition.

To the various objections which have been urged against this operation I will merely say that practical results always outweigh theoretical conclusions. For seven long years it has stood the test of time and numbers, and none of the evils which were predicted for it have come to pass. So far as I know there has not been a single instance in which pregnancy or parturition has been embarrassed by reason of it; there has not been a single instance of incarceration or strangulation of the bowel; there has been no unpleasantness in any shape or form, and the results have been uniformly pleasant and satisfactory. I will say in conclusion that I use the method in all kinds of deviations—backward, forward or downward—but always reinforce the operation with such work on the pelvic floor or other manifestly defective parts as may be indicated.

OBSTETRICS AND DISEASES OF CHILDREN.

Under the Charge of D. J. EVANS, M.D., C.M., Lecturer on Obstetrics, Medical Faculty,
McGill University, Montreal.

ACCIDENTAL HÆMORRHAGE AND ITS TREATMENT.

Dr. J. Spencer Sheill, in the *Antiseptic*, for Sept., 1906, while acknowledging the obscurity of the etiology of accidental hæmorrhage, concedes that the condition is commoner in women who have borne many children. He thinks on the whole that endometritis and decidual diseases predispose to the condition. The exciting causes may be very varied. All of the author's cases have presented a definite history of a fall, a blow, or a fright from two to five days previous to the onset of the urgent symptoms.

With regard to treatment. If the hæmorrhage is very slight, rest in bed, light diet, and calcium lactate grs. 15 to 20, or acid gallic grs. 5 t.i.d. may favor clotting. Bromides and morphia are useful if there is much pain or excitement. If the hæmorrhage is very severe the author advocates rupture of the membranes if the patient is not at term. He recommends the plug and binder method and advances many reasons in their favor. He uses plugs of absorbent cotton the size of a large walnut tied at six-inch intervals to a long piece of twine, in the form of a kite tail. These are sterilized by boiling for ten minutes. The total bulk of plugging will equal about the size of the fetal head at term. The ordinary stiff roller towel or binder is placed around the patient and tightened, especially around the fundus, until its tightness causes the patient pain. This binder must be tight and a peritoneal band must be attached to prevent its slipping up. Heart stimulants are then em-

ployed, the foot of the bed raised, saline solution under the breast or transfusion of two pints of it plus M. xx. of 1-1,000 adrenalin solution slowly into a vein in the forearm, and morphia gr. i hypodermically. Labor usually sets in in from three to twenty-four hours. In twelve hours the plugs may be removed, catheter passed, vagina douched and the plugging repeated. When strong labor sets in, the plugs are removed, the vagina douched, and membranes ruptured, the binder tightened, as the size of the uterus is reduced. The author warns against post-partem hæmorrhage in these cases as the tonicity of the uterus is often impaired by the distention to which it has been subjected.

SOME POINTS IN THE DIAGNOSIS AND TREATMENT OF ACCIDENTAL HÆMORRHAGE.

Dr. Adam H. Wright (*Am. Jour. Obstet.*, Nov., 1906) in a paper presented at the nineteenth annual meeting of the American Association of Obstetricians and Gynecologists, held at Cincinnati, Sept. 20-22, 1906, concludes as follows:—

1. Making a diagnosis in many cases of concealed accidental hæmorrhage is generally difficult, sometimes impossible, before delivery.
2. The so-called important symptoms—anaemia and distention of the uterus—are not present in a large proportion of such cases.
3. The serious condition in most cases is shock from traumatism, and collapse from loss of blood.
4. The diagnosis of the combined internal and external accidental hæmorrhage is more readily made, but the amount and the effect of the blood within the uterus are often difficult to ascertain.
5. Even in such cases shock from traumatism is sometimes the predominating element; on the other hand, collapse from loss of blood, whether retained in the uterus or flowing externally, is sometimes the important factor.
6. In all cases where shock from traumatism is the main condition or the predominating element, the most urgent requirement is proper treatment of such shock, and not emptying the uterus.
7. In a large proportion of cases of the combined internal and external hæmorrhage, the introduction of the vaginal plug, with the application of an abdominal binder, appears to be a very safe and effectual plan of treatment.
8. In a small proportion of cases, especially during labor, puncture of the membranes is beneficial.

9. Any form of accouchement force, which includes forcible dilatation of a rigid cervix is never justifiable.

10. The best operative procedure would appear to be some form of vaginal section; but its field is limited, and not accurately defined.

LAPAROTOMY IN INFANCY AND EARLY CHILDHOOD.

Dr. G. W. Hunter, in the *Medical Age*, July 25, 1906, speaks of a child one day old operated upon to arrest internal hæmorrhage due to rupture of the umbilical artery without the administration of an anæsthetic, which recovered without incident. He thinks that lack of appreciation that the patient is an infant, consequently that certain changes or modifications in management and treatment are essential, is probably responsible for the recorded unsuccessful surgical operations performed upon young subjects. As of prime importance he considers rapidity of operation, prevention of the slightest hæmorrhage, and the sustaining of the body temperature. The child should be well nourished before operation, and feeding should be resumed as soon as permissible afterwards. He then records series of grave operations which have been performed upon young children with success, where these precautions have been regarded. His conclusions are as follows:—

1. By observing certain modifications in management and treatment, even major surgery in the young should not be necessarily attended with greater operative mortality than that which follows similar measures in adult life. 2. Barring unforeseen and unpreventable surgical accidents, the high death rate which has hitherto been regarded as inevitable following operations upon the young may be largely reduced by the exercise of proper judgment in the application of modern scientific surgical and therapeutic principles.

THE USE OF OXYGEN IN ASPHYXIA NEONATORUM.

In the *Medical Record*, Nov. 10, 1906, Dr. Spirak of Denver reports two cases in which, when all the ordinary and well-known methods of resuscitation had failed, in cases of asphyxia neonatorum, the use of oxygen was attended by happy results. One case was in his own practice, the other in that of another attending physician at St. Luke's Hospital. On both occasions it was done at the suggestion of the attendant nurse.

PNEUMOCOCCAL PERITONITIS.

Dr. H. S. Clogg, writing in the *Brit. Jour. of Children's Diseases*, Nov., 1906, describes this uncommon, but by no means rare, affection of the abdomen in a lucid and interesting manner.

The mode of infection is varied. Direct inoculation may occur, but must be very rare. Infection by direct continuity through the diaphragm from the thoracic viscera accounts for some cases. Pulmonary involvement may be secondary to that of the peritoneum. Infection by the blood appears more or less hypothetical. In adults the genital organs may be responsible for a few cases, but this mode of infection is doubtful.

Reviewing all the facts, it seems that the intestine will in the future be proved to be responsible for many cases. This source of infection may account for the greater frequency in children.

This form of peritonitis is more common in childhood and in females. The youngest case recorded was four days old. It is probable that many cases of "idiopathic" or "essential" peritonitis are really cases of pneumococcal peritonitis.

The condition may be secondary to some other pneumococcal affection, usually pulmonary. In children it is usually primary. The peritoneal exudate may be encysted or diffused, the former being the more common forms. Primary encysted peritonitis has a sudden onset with acute abdominal pain, vomiting, and fever. The pain, of varied intensity, is chiefly confined to the lower abdomen, and to the right side. Diarrhœa, which is common, is persistent and resists treatment. The severe initial symptoms usually subside in about 24 hours and the general condition improves. The temperature oscillates, some pain and tenderness are present in the abdomen, which becomes distended by meteorism, the diarrhœa persists, the evacuations are soft, fluid, very fetid, and may contain mucus and blood, their passage being associated with colicky pains and tenesmus. Rigidity of the abdominal wall is not marked.

The abscess generally forms in the hypogastric and iliac regions, perhaps more to one side, and becomes evident about the twelfth to fourteenth day of the illness. Diagnosis cannot be made till the abscess becomes palpable. The abscess is round, tender, elastic, and as a rule well defined. It may be situated in the mid-line below the umbilicus, or may extend to one or other iliac fossa. The temperature becomes elevated in the afternoons. The abscess may break through the abdominal walls, or may discharge through the umbilicus, or the vagina in females.

Diffuse peritonitis has a sudden severe onset and runs the course of a septic peritonitis. Only a few cases of recovery, and that after operation, have been recorded.

The diagnosis may be confounded with typhoid fever, appendicitis, tuberculous peritonitis, and other forms of peritonitis. The diarrhœa serves to mark the condition from appendicitis, especially the foul, fetid character of the stools. The rigidity of the abdominal walls is more marked in appendicitis.

The cardinal points in the diagnosis of encysted pneumococcal peritonitis are: The sudden onset with abdominal pain, vomiting, diarrhœa, and fever; amelioration of the symptoms, persistence of the diarrhœa, and later the formation of a hypogastric swelling. The prognosis in the encysted form is relatively good after operation. Diffuse pneumococcal peritonitis has a high mortality.

The treatment is given in one word—laparotomy. Large rubber drainage tubes should be employed on account of the character of the pus.

CÆSARIAN SECTION IN SCHAUTA'S CLINIC.

In the *Archiv f. Gynäkologie*, Berlin, Neumann discusses from various points of view the 175 Cæsarean sections performed in Schauta's clinic, with five others done immediately after death. He remarks that this is the largest series of operations yet published from one clinic. He tabulates the various details, showing that 161 of the women recovered, including 52 febrile cases; in 140 cases there was no reaction on the part of the wound, while there were stitch-hole abscesses in 10 and in the abdominal wall in 8. In 25 cases post-operative bronchitis was observed, with lobular pneumonic foci in 4 and croupous pneumonia in 1. About half of these pulmonary cases occurred during the winter. In one case a latest tuberculous affection of the lungs made itself manifest in the bronchitis after the operation. These respiratory affections occurred about equally with the various anæsthetics employed. The importance of these affections is shown by the fact that these cases were all accompanied by fever except in 5 out of the 45. Coughing also has an unfavorable influence on the healing of the wound, being probably responsible for 9 out of the 18 cases in which the wound had healed by primary intention. In the 14 fatal cases the wound had healed by primary intention in several, and death was due to eclampsia in 3 and to other causes in the 6 for which the operation was in no way responsible. In 8 cases the operation may possibly be incriminated, one death being due to asphyxia under chloroform, one on the fifth day to pneumonia. The anæsthetic in this last case had been Schleich's mixture. Death in another case was the result of axial torsion of the intestine from adhesions consecutive to the Cæsarean section. In another case it was the result

of hæmorrhage from the stump after a Porro operation. Hæmorrhage from the stump in a second case was due to pre-existing infection. In the three other cases death was due to infection of the wound, and they emphasize anew the extreme caution necessary in selecting cases for Cæsarean section, also the necessity for avoiding internal examination of women for whom Cæsarean section is contemplated, and, last but not least, absolutely certain apses on the part of the operating surgeon. Of the 175 children, 164 were living twenty-four hours after the intervention, 7 were born dead and 3 died in asphyxia. In 18 cases Cæsarean section had been done before, in 13 instances at the same clinic. Adhesions were found in all these cases, so large and strong in 2 cases that it was hard to open up the peritoneal cavity. The adhesions were at about the same points as in Haven and Young's material. They show that the ultimate outcome even with modern technic is still far from perfect. The best results were obtained with a sagittal incision, made as high as possible.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., C.M., L.R.C.S., Professor of Ophthalmology and Otology Medical Faculty of the University of Toronto.

THE TREATMENT OF EYE DISEASES BY CHLORATE OF POTASSIUM.

Koster (the *Ophthalmoscope*, Nov., 1906), has treated inflammations of the eye with chlorate of potassium, since the medicament is so frequently used in inflammation of the mouth and throat. In a 3 to 5 per cent. solution the drug does not cause any disagreeable sensation when dropped into the conjunctival sac. It is useful in all conjunctival inflammations, but especially in chronic conjunctivitis, with sensations of dryness, itching of the angles of the eye, and by the formation of a foam-like secretion at the angles. Bacteriological experiments showed that the drug acted as a weak disinfectant and inhibits growth of all kinds of bacteria of the conjunctiva, except staphylococci.

THE VALUE OF THE OPHTHALMOSCOPE AS AN AID IN THE DIAGNOSIS OF THE CAUSE OF BRAIN LESIONS.

Some months ago a lady came to my office to have her glasses changed. As she entered the room, I was struck with her pailor. Deeming its cause as beyond the object of her visit to me, I turned to the examination of her eyes, and for the moment the lady's lack of healthy

color passed from my mind. As a matter of routine, I looked into the background of her eyes and found there two choroidal patches strongly suggestive of syphilis as their cause. I know not whether she read my thoughts, but after I laid down the ophthalmoscope, she said, "Doctor, I have two chronic sores in my mouth, one on either side, and nothing I put on them will heal them." On another occasion, a gentleman consulted me to find why his glasses were no longer satisfactory; they had been entirely so until a few weeks before. He could give no reason why his reading vision was less perfect with these glasses than formerly. So far as he knew, his health was not impaired. A single glance at his fundus showed that much-feared picture, extensive albuminuric retinitis. Another time there happened to come to my office with a friend a lady who had formerly been a patient of mine. While talking to her, she mentioned that within the past six months she had had several epileptic fits; that their cause was unknown to her physician, and that no medicine could dispel the awful depression which followed these attacks. I asked to be permitted to look into her eyes. Double choked disc; and the reason no medicine could relieve her was clear.

Short chapters similar to the three just read are common in the ophthalmologist's year-book—so common, that he himself at times forgets the importance of the ocular fundus as a diagnostic vantage point. The writings on the fundus in disease, if collected, would fill many volumes. They represent, however, special pleadings in a special court and, for the most part, fail to attract the attention of the general practitioner, who, not always, for there are exceptions, but, as a rule, do not turn to the background of the eye as a possible source of information unless the patient has some marked symptom of ocular disturbance. That the value of an examination of the fundus of the eyes is not properly appreciated is clearly shown by the fact that life insurance companies so rarely avail themselves of it in writing their so-called risks. If they knew its value, no large policy would be written for a man over forty-five without first having a detailed report of the fundus from a competent ophthalmologist. This line of thought, however, is carrying me away from the slight paper I am offering the Academy this evening. I merely wish to repeat two cases illustrating the value of the ophthalmoscope as an aid in diagnosis of brain lesions, and if—to my friends, the general surgeon and the general practitioner—their detail savors strongly of the academic, they will please bear with me patiently, remembering my song is not of drugs and the knife.

A case of Isolated Supra-nuclear Paralysis of the Seventh Nerve: Mrs. C., aged 44, complained that for the past month her left eye had been watering in an annoying manner. Her physician advised her to have her glasses changed in hope of obtaining relief. The only notice-

able abnormality at first glance was that the inner end of the lower lid of the left eye did not hug the eyeball closely, and that in the gap thus formed the conjunctival secretions accumulated. Examination of the left orbicularis revealed a partial paralysis. Mrs. C. could close the left eye; but when told to forcibly shut it the skin over the upper lid did not wrinkle as on the right side. When told to smile or laugh, the orbicularis responded normally. The orbicularis oris was apparently normal; the patient being able to carry the corner of the mouth toward the left. When, however, she was told to whistle, the more delicate forced adjustments of the orbicularis of the left side could not be accomplished and whistling was an impossibility. When Mrs. C. smiled or laughed, the lip curves appeared normal. Without going further into the actions of the various muscles supplied by the left facial, it may be said that the emotional movements of these muscles seemed little affected, and the paralysis became marked only when the *forced voluntary* movements and *adjustments* were demanded. We had thus to deal with an incomplete supra-nuclear paralysis of the seventh nerve, for in the paralysis of the infra-nuclear variety, the emotional and voluntary movements are equally affected. This much being known, the next question was: What caused the paralysis? Examination of the urine gave no clue. The heart had no demonstrable organic lesion. The sphygmomanometer registered 145, a tension sufficiently high to suggest possible vascular changes, especially in the smaller vessels. The patient, whose health had been excellent, could give no cause for the facial trouble—indeed, she had been unconscious of any disturbance other than the overflow of tears, and, for a few hours, of a slight stiffness in the *right* side of the mouth. Examination of the fundus of the eye revealed changes due to arteriosclerosis, most markedly noticeable in the small vessels. Here, then, was the practically certain key to the proper understanding of the incomplete supra-nuclear paralysis. The paralysis was entirely well in a few weeks.

In the retina, which is but an unfolded leaf of the brain, we can see what are in reality cerebral blood vessels, *i.e.*, the retinal arteries and veins, and from their appearance we can frequently know the condition of the intercranial vessels. More than this, we can see and watch the effect upon the cerebral tissue, *i.e.*, upon the retina, of the obliteration or rupture of minute vessels supplying cerebral tissue. We can see the changed outlines of the sclerosed vessels; see the escaped blood in the retina; watch its gradual disappearance; watch the changes as the hæmorrhages lessen and, finally, where the hæmorrhages are large enough, or of certain characters, see the scars left where they destroy the nerve tissue.

Exactly similar changes take place in the hidden intracranial tissue. Hence, we have the right to infer that in the case of Mrs. C. there had either ruptured or become closed by the thickening of its intima some small branch of the middle cerebral artery of the right side; and, too, we can understand both the slight character of the paralysis and its ultimate complete disappearance. I do not see how, without further data, a more exact location of the disturbance can be stated. The ophthalmoscope in this case reveals the clue which leads us to such an understanding of the conditions, as without its use would be impossible.

Cases similar to the above are of common occurrence. Within a few days after I saw Mrs. C., Mrs. L. consulted me in regard to changing her glasses which she had worn only a few months and which had given her no relief. In this case, an incomplete paralysis of the right external rectus was easily demonstrable. The sphygmomanometer registered 185. The urine was negative. The ophthalmoscope however, again showed the sclerotic changes in the retinal vessels, and again gave the key to the proper appreciation of the cerebral conditions.

A Case of Left-sided Hemianopsia.—Dr. B., aged 50, stated that some months prior to his visit to me, he had suddenly become aware that his vision was imperfect; that he had his eyes examined, but that beyond a slight conjunctival irritation, no trouble had been found; that he had changed his glasses several times, but they had given him no relief. Externally, the eyes were normal. Judged by a test card, his distant vision was found to be normal. With glasses appropriate for his age and slight error of refraction, he could read the smallest type. The muscular equilibrium by the visual tests was normal; and yet he asserted that his vision was most imperfect.

Ophthalmoscopically, the lens, iris, vitreous, nerve-head and adjacent iris and choroid showed no diseased condition. "Tell me," I said, "more about your loss of vision." "Well," said he, "for instance, I often in driving along the road run into some vehicle without seeing it." At once the trouble was apparent. He had a defect in the field of vision. Examined with the perimeter, there was found to be a complete left-sided hemianopsia, *i. e.*, the patient was blind for the entire left half of each field of vision.

The trouble had come on suddenly and painlessly. No heart or kidney lesion was demonstrable. The blood vessels of the fundus were normal in appearance. Dr. B. admitted that in his earlier life he had visited the maidens of the Red Queen, but, so far as he knew, no one of them had left him a lasting memento. Some fifteen or more years ago, he had discovered a small painless sore on his penis. He had visited a well-known venereal specialist, in Baltimore, who had assured him it was merely herpes. He had paid no further attention to it, for it was

soon gone and, to his knowledge, no evidence of syphilis had afterward appeared. Examination revealed no paralysis. There was no vertigo, no vomiting, no headache. The patellar reflexes were, however, markedly increased, so much so as to be a source of some uncertainty at times in his gait. A more careful examination of his fundus was then made, and in the outermost portion of the choroid of the right eye were found several patches of oid choroiditis, making it practically certain that the patch of "herpes" was a chancre, and that occlusion of the posterior cerebral artery, probably by syphilitic disease of the vessel's wall, was the cause of the hemianopsia, for the posterior cerebral supplies the optic ganglia (optic thalamus, corpora quadrigemina and geniculate bodies), and in the cortex, the visual region in the occipital lobe. That the main branch of the posterior artery was occluded, may be inferred from the increased reflexes, suggesting nutritional disturbances in the boundary areas of the posterior and middle cerebrals.

So intimately connected with other symptom-giving nerve structures are the visual fibres between their point of entrance into the cerebrum and the primary optic ganglia that complete hemianopsia from vascular disease of the middle cerebral vessels is impossible unless accompanied by other easily recognized symptoms.

Complete hemianopsia from disease of the vessels supply one optic tract is unknown. Hemianopsia of the exact kind found in the above case is never seen in disease of the chiasm. That the patient did not recognize the nature of his trouble is, in all probability, due to the fact that the hemianopsia was left sided. We read from left to right. In this case Dr. B. read away from the blind field toward the normal.—*John Dunn, M.A., M.D., in the Virginia Medical Semi-Monthly, September 21, 1906.*

SUPPURATIONS OF THE TEMPORAL BONE AND THEIR RELATION TO LIFE INSURANCE.

Barnhill (*Med. and Surg. Monitor*) states that mortality statistics do not represent the full mortality due to ear diseases, because of the failure to recognize the relationship between cause and effect.

To decide whether an applicant, with a running ear, is insurable or not, one must take into consideration both the symptoms obtainable, together with the absolute facts obtained from examination of the middle ear and accessory cavities. Headaches, fits of irritability, of dizziness, lessen the safety of the risk. Cholesteatoma, when present, should void the risk. Occlusion of the canal from chronic thickening of the lining skin, the existence of one or more fistulæ, are conditions which should unfit applicant for life insurance.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., G.M., Toronto, Fellow of the British Society of Laryngology, Otology and Rhinology.

 THE SUB-MUCOUS RESECTION OPERATION ON THE NASAL SEPTUM.

Dr. J. C. Beck, at the last American Laryngological, Rhinological and Otological meeting, gave the following reasons for preferring this method to all others:—

1. The operation can be performed in almost every instance under local anæsthesia;
2. Slight pain, discomfort, or shock;
3. Almost entire absence of hæmorrhage, both at the time and subsequently to the operation;
4. Simple and short after treatment;
5. One side alone is plugged during healing;
6. Absence of crusts during healing.

 THE ULTIMATE RESULTS OF RADICAL OPERATIONS UPON THE ACCESSORY NASAL SINUSES.

The great relief given to patients with suppurating sinuses, in which free drainage is established, tends to make one use the word *cure* when in reality only *improvement* has taken place. In acute cases this does not so often apply, but in chronic cases, associated especially with ethmoidal disease, we seldom secure, except after a very long course of treatment, absolute cure—"cure" meaning complete cessation of all abnormal discharge.

One can readily understand this if he reflects for a moment on the very great and extensive ramifications of the ethmoidal labyrinth. It is quite impossible to curette the entire ethmoid from the nose, and only after very great difficulty by external operation. Furthermore, in dealing radically with the nasal accessory sinuses, we leave the mucous membrane of these cavities exposed to a direct current of cold air and dust which nature never intended they should withstand. The following remarks, taken from the *Journal of Laryngology*, are very much to the point:—

"Dr. D. Bryson Delavan, New York City, commented on the fact that relief has not always been finally afforded by radical operation, that the progress has often been painfully slow, and the ultimate outcome unsatisfactory and disappointing. Unsuccessful cases are not often reported, and statistics calculated to show the relative values of different

methods of operation are not attainable. There have been notable exceptions to this rule in the case of the work of some members of the Association, who have frankly stated their actual results. In some instances the nasal cavity has assumed a condition to all intents normal as to sensation and function, yet the patient has been unaware of any unusual change in it and the progress of time has been unmarked by semblance of accident or relapse. In other cases the results have not been so fortunate. Sometimes the cure itself has been incomplete, or, again, new foci of disease have developed, at times long after every probability of their appearance has passed away. The ultimate condition is a subject which apparently has been studiously avoided. It cannot be denied that the results in many cases have been brilliant and permanent, but sometimes the formation of crusts persists for years after intra-nasal operation. The undue widening of the nasal cavities may cause the many unpleasant symptoms due to the too free admission of air. A better knowledge of all these results is highly desirable, because—first, if the seriousness of the situation has been over-estimated it is well that we should be reassured; secondly, if it has not been over-estimated the best means for its prevention should be studied and applied. Most important of all, through a clear understanding of the dangers, difficulties and discomforts of these more radical cases, the profession will be led to appreciate more fully their importance; and by prophylaxis of the causes of acute sinus disease and early recognition and efficient treatment of it when it has once appeared, to cure the condition, and thus reduce to the lowest possible number the cases which have become fully and hopelessly established as chronic. The establishment of necrosis calls, of course, for the removal of offending tissue. Great responsibility rests upon the practitioner who first sees the case, particularly during *grippe* seasons, when so much can be done to make the patient comfortable, to lessen the severity of the inflammation, and to prevent the establishment of the later features of neglected sinus disease. So, also, the possible influence of a specific factor in a given case should lead us to administer the iodide, neglect of which precaution may lead to widespread disaster."

SOME OBSERVATIONS ON NON-TRAUMATIC PERFORATIONS OF THE SEPTUM.

Dr. Chas. W. Richardson (report American Laryngological meeting, May, 1906, *Jour. Laryngol.*), in a paper dealt with those cases without a known etiological factor, and an indefinite pathological history. He excluded cases caused by traumatism, acids, or chemicals. He drew attention to the unsatisfactory efforts made by nature in the repair of injuries of the anterior inferior portion of the septum.

There seem to be some condition which lessen the normal nutritive activity of the cartilaginous septum, so that an apparently simple irritation may result in considerable destruction of tissue. Typhoid fever is an instance, while tuberculosis is not so uncommon as is usually thought. Syphilis is, however, considered to be one of the most common constitutional conditions causing septal perforations, in the opinion of Drs. Roe and Goodale, who spoke in the discussion on the paper. Dr. Thrasher considered that syphilis was the great cause of perforation in the septal bones, but not in the cartilages.

THE REMOVAL OF ADENOID VEGETATIONS THROUGH THE NASAL PASSAGES BY A NEW METHOD.

Dr. Freer (Chicago) finds objections to the instruments now generally employed for removal of adenoids, claiming that they do not afford clean and sufficient removal of the offending mass. The ramifications also of the naso-pharynx are also a hindrance. Freer uses a specially designed forceps with chloroform anæsthesia and cocaine.

We cannot see anything but disadvantages in trying to pick pieces of lymphoid tissue from the naso-pharynx through the nose. We cannot see how this method (which is really not a new one) can ever become fashionable among any class of rhinologists. It would seem as though the time had come for some new or renewed old operation in the naso-pharyngeal cavity.

NASAL MALFORMATION.

In an article by Dr. Charles Stickle, appearing in the *Brooklyn Medical Journal*, Sept. 06, the following, we think, very appropriate remarks on sub-mucous resection of the nasal septum appear. The sub-mucous resection of the septum is a surgical procedure which in my opinion, if done properly, hence successfully, is the most difficult of all intra-nasal operations. Tedious in the extreme for the operator and patient, it requires a manual dexterity and an ocular precision for which not all, otherwise good intra-nasal operators, are fitted. There is no doubt that this method is at present very fashionable, but, as is the case with all surgery, both very good and very bad operations are being done. It seems to me that this method should not be condemned by those who have either not tried it, or have tried it but unsuccessfully, at least until the general wave has passed to allow time for perfecting, by those not naturally fitted for the work, or by their withdrawal from

that particular field. We must learn from practice and experience, but we cannot all do the same thing equally well. This method has been generally adopted in all the nose and throat clinics of Europe, since it was originated by Krieg as the rational method of straightening septa or the removal of septal exostoses, whether for the relief of interference with the air current or for cosmetic purposes with a degree of success which precludes the possibility of returning to crude methods, comparatively speaking, in previous use.

When any new method of operating on any pathological condition appears, the tendency is for operators, who become too enthusiastic, to operate in many cases when simpler measures will suffice. This is well shown in nasal septum surgery. The patient's complaint should guide one a good deal as to what should be done. Generally speaking, obstruction to nasal breathing is the complaint. It does not follow here that if the septum is not perfectly plumb a sub-mucous resection is necessary. There may be a spur or ridge on the apex of the convex side which, if removed, gives quite enough air way without a further and larger operation. Furthermore, considerable more space may be gained by attacking the inferior turbinate with snare or cautery. We think the sub-mucous resection, in selected cases, an ideal operation; but, like every ideal operation, is being frightfully abused.

CONTROL OF NASAL HÆMORRHAGE.

Henry J. Mulford (*American Medicine*, Dec. 23, 1905) describes a simple method for controlling nasal hæmorrhage, citing cases, and outlining the blood supply of the nose and pharynx. His method consists of the subcutaneous injection of adrenal extract into the arterial supply at the nearest accessible point to the bleeding area. The injection may be made directly into the artery supplying the part, or it may be thrown into the tissue closely adjacent to the artery. This certainly is simple, but the result is marvellous. The ingoing arterial current sweeps the solution directly into the leaking area, all the vessels of the part are constricted, and almost at once the hæmorrhage ceases.

SARCOMA OF THE NOSE.

Dr. William H. Ballenger (*Laryngoscope*, February, 1905) reports a case of a young lady with a sarcoma of the nose in which he first removed nearly the whole of the right inferior turbinate and submitted it to a pathologist for examination, receiving the report that the process

was tuberculosis. This report being unsatisfactory to him, he removed some more tissue and received a report that it was granulation tissue. Feeling that the case was one of sarcoma, despite the findings of the pathologist, he decided to operate by the radical method of sawing through the maxillary bone and turning the nose down over the mouth. In this way he was able to remove a large amount of necrotic and diseased tissue. After submitting specimens to the pathologist, he received a report that the disease was sarcoma. There had been no recurrence at the date of the report.

MEDICATED OINTMENTS IN THE NOSE.

A. W. MacCoy has made a series of observations on the therapeutic value of medicated ointments in certain affections of the nasal chambers, and offers the following conclusions:—

(1) Notwithstanding our bent of mind toward surgical procedures for the relief of diseases of the nasal chamber, the rational employment of drugs must still occupy our attention.

(2) 'Our constant and persistent use of nasal washes, especially during the winter season in our climate, tends to harmful results.

(3) By the employment of curative medicaments, in the form of soft ointments in the nasal chambers, we can avoid certain risks following the use of washes, etc., and, at the same time, further the advancement of our patients toward a speedier cure.

(4) The availability, convenience, and adaptability of medicated ingredients in the therapeutics of the nasal chambers appeal in a rational manner for their employment.

(5) Ointments prescribed should be dispensed in collapsable tin tubes as a protection from contamination and because this form of dispensing renders them most convenient for use at all times and in all places.—*Laryngoscope*.

THE ASTHMA OF HAY FEVER.

If blotting paper, which has been saturated with potass. nitrate, is subsequently saturated with the following formula and dried, the fumes of it, when ignited, will afford great relief upon inhalation:—

R

Ext. Bellad. ʒ xv.
Tinct. Benzoin ʒ xx.
Ext. Atramonii ʒ xv.

(*Med. Record.*)

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EDITORIAL.

THE PROVINCIAL GRANT TO HOSPITALS.

The Legislature of Ontario has been in the habit for many years of appropriating \$110,000 annually to be distributed among the hospitals of the Province. This money is divided in proportion to the number of days' stay in the various hospitals of patients from whom these institutions do not receive more than \$3.50 per week. In the case of hospitals not more than ten years in existence, the division is made on all the patients, regardless of what these hospitals receive from them.

Now, we do not think this is a good plan. It strikes us that it would be much better were the Government to fix a definite per diem amount to be paid per patient on whom the distribution should be made. Further, we think the capitation should only be allowed on such patients as are certified paupers or placed in some hospital under a municipal order.

As things are now, people of ample means to pay for their hospital care, and also able to pay for their medical or surgical attendance, avail themselves of the privileges of a public ward, pay \$3.50 per week, and receive free attendance, the Government capitation partly paying for the hospital maintenance. This is all wrong. The Government aid should not go to the support of such persons.

A short time ago, Sir Victor Horsley, in an able address, invited the attention of the medical profession in Britain to this very condition of things. In our Quebec letter the same condition of hospital abuse is evidently rampant in Montreal. The cure is very simple. Those who are placed in a hospital under a municipal order should also be regarded as the proper recipients of Government aid, and should come under the rules regarding clinical teaching, should such be given in the hospital. All patients who pay, or are paid for by any one or a society, should not be regarded as entitled to Government assistance. The hospitals would thus be compelled to raise the fees on paying patients to such a level as would make them self-sustaining.

This plan might raise the fees to such a level as to compel a few to ask for a municipal order that under the present law do not, but this would be a far less evil than the wholesale and wilful pauperization of large numbers, as is now the case. Those who paid would have to pay

enough to cover the cost of their maintenance, while those who did not pay would receive both municipal and Government aid, and would be paupers in the true sense. That a rich patient can select a public ward, pay \$3.50 per week, draw upon Government aid, be regarded thereby as a pauper, and claim and receive free attendance, is all wrong. There is a remedy. We think we have pointed out a remedy. If any one has a better one, we shall be glad to give it all the publicity at our command. One thing is clear, the medical profession has it in its power to remedy the evil, provided it only exerts that power.

THE CONTAMINATION OF PUBLIC BODIES OF WATER.

It is unlawful for any municipality to pour its sewage into lakes and rivers, especially if any other town or community is liable to be injured thereby. The following clause in the Act makes this quite clear:

“No sewage, drainage, domestic or factory refuse, excremental or other polluting matter of any kind whatever, which either by itself, or in connection with other matter, corrupts or impairs, or may corrupt or impair, the quality of the water supply for domestic use in any city, town or incorporated village, or other municipality, or which renders or may render such water injurious to the health, shall be placed in or discharged into the waters, or placed or deposited upon the ice of any such source of water supply near the place from which any such municipality shall or may obtain its supply of water for domestic use; nor shall any such sewage, domestic or factory waste or refuse, excremental or other polluting matter be placed or suffer to remain upon the bank or shore the place from which such municipality shall or may obtain its supply of water for domestic use as aforesaid, nor within such distance thereof as may be considered unsafe by the Provincial Board of Health after an examination thereof by a member or officer of the said board, and any person who shall offend against any provision of this section shall, upon summary conviction, be liable to a penalty of not more than \$100 for each offence, and each week's continuance after notice by the Provincial Board of Health, or local Board of Health, to abate or remove the same shall constitute a separate offence.”

It is the duty of the various Boards of Health to insist that the provisions laid down in the clause, just quoted, be enforced. A person known to have smallpox is not allowed to travel on a train. In like manner, water that is known to carry infection or disease should not be allowed to run down a stream, or to be carried by the winds and currents along a lake shore.

To wilfully adulterate flour, tea, coffee, or sugar is a crime. It is not less so to wilfully pollute water and then sell it to the people. To pour sewage into bodies of water appears at first sight to be a cheap way of disposing of it; but in the long run it is a dear way. It certainly is nasty enough to be revolting to the tastes of the most depraved. Thousands lose their lives annually through this cause, and very many thousands pass through long periods of sickness, many of whom may have their health more or less permanently impaired. This is poor economy to save money in the proper disposal of the sewage of a city or town. It is also very wrong.

THE DANGER OF FILLING TWO IMPORTANT PUBLIC POSITIONS.

Dr. Sheard is Medical Health Officer for Toronto. In the discharge of his duties as such officer he has given very general satisfaction. When, however, he assumed the position of chairman of the Provincial Board of Health as well, there were some fears that the two positions might clash. The following quotation from the *Globe* of 5th January rather confirms the view that it may be very difficult for Dr. Sheard to hold both positions and be strictly impartial:

“Dr. Sheard, City Medical Health Officer, disclaims any disposition on his part, as chairman of the Provincial Board of Health, to compel the city to accept the trunk sewer proposal. While the Act gives the Provincial Board of Health power to compel the construction of the sewer, the doctor says that in the present uncrystallized state of the trunk sewer proposition it would be absurd to suggest that the sewer should be built. He says that as chairman of the Provincial Board of Health he might possibly be called on to prevent the city pouring its sewage into the lake out of a trunk sewer, hence it would be manifestly unwise for him to make any suggestions as to the possibility of the board compelling the city to construct the sewer under the present circumstances.

“Dr. Sheard says that the question of the filtration of the city water is one that must come up for consideration by the civic powers, and he would like to see the question considered in the near future. He says: ‘In the face of the present situation I think it would be wise to consider what improvements in the city’s water supply can be secured by an economical method of water filtration.’ The doctor is not yet prepared to suggest a scheme of filtration.”

Toronto is a very important commercial centre and liable to experience an invasion by some form of infectious disease, or to have some local health problem arise, wherein it might become necessary for the Medical

Health Officer for Toronto, and the Provincial Board of Health to take opposite views. Under such a juncture there might be some fear that the interests of the one or the other might suffer.

TYPHOID FEVER.

A short time ago, when paying a visit to Toronto, Professor Osler made the statement at a meeting of the Toronto Medical Society that it was a shame that there was so much typhoid fever in Canada and the United States. He remarked that it was now becoming a rather scarce disease in England, and hardly occurred at all in some counties.

It has been stated in the press within a few weeks that there were a thousand cases in Montreal. It is a fact that the water in Toronto has been bad for some time, and as a consequence we have many cases of the disease. It does seem rather hard that any city should sell a contaminated water to its citizens, when a little care would avoid such a state of affairs.

Modern bacteriological science and sanitary investigation have proven beyond a doubt that typhoid fever infection has been carried as far as forty miles. The folly of pouring the sewage of Toronto into the lake a short distance to the east of the main portion of the city is, therefore, apparent. It would float past the Island and pollute the water supply of the city. There is only one way of disposing of sewage, and that is to destroy its infecting qualities before it is poured into any public body of water, either lake or river. This can be done, and anything less is criminal. No municipality should sell typhoid fever to its people.

What would be thought of the individual who sold a cake to a person, knowing that it contained a dangerous poison? When the indignation of the people will not tolerate this sort of thing any longer, then the various municipalities, especially the larger city centres, will correct the defects in the water supplies that render them unsafe for drinking purposes.

THE PURE FOOD LAW.

The Federal Government is moving in the right direction by enforcing proper inspection of all canning and meat-packing establishments. The bill demands that all meat, fish and vegetables employed shall be clean and sound. In the United States much headway has been made of late. In the matter of pure drugs it would appear that our neighbors to the south have taken a forward step. From the *Medical Times* of January we take the following from its editorial columns :

"Similar results are obtained by the legislation known by the short title, 'The Food and Drugs Act, June 30, 1906.' The Secretary of Agriculture is here again in complete control, although two other departments of the Government are interested—the Treasury and the Department of Commerce and Labor. This Act includes not only drugs, but such products as confectionery and prepared foods. All labeling must be in English, not smaller than eight-point caps. There are a number of substances used in drugs and foods which must be shown on the label. These are alcohol or derivatives or preparations containing alcohol, morphine, its derivatives and preparations containing the alkaloid or its derivatives, opium similarly described, cocaine, heroin, eucaine, chloroform, cannabis indica, chloral and acetanilide."

Let us have such a law and also have it *strictly* enforced. The many vendors of proprietary medicines will not thereafter sup with quite so long a spoon. Why should *they* be allowed to sell to the public dangerous drugs and the same not be made known to the purchasers?

THE MODERN TREATMENT OF CANCER.

There are few diseases of greater interest to the medical profession than cancer. The reasons are not far to seek. It is on the increase; and some have made the estimate that, if the present rate of increase is maintained it will not be many years until it equals tuberculosis. Then again, it frequently attacks parts of the body that are not the most easily reached by surgical means. But, finally, it is so often fatal, and during its progress gives rise to so much suffering. All these features of the disease appeal to the public and the profession; and the longing eye looks for, and the wasted hand is outstretched for, a cure. It is with some interest that we turn to the words of Mr. Edmund Owen, in his Bradshaw Lecture, before the Royal College of Surgeons of England, on 12th December, 1906.

The note that runs through the lecture is early removal and thorough removal. He refers to the pioneer work of the late Sir William Mitchell Banks, who so ably advocated these views.

In speaking of cancer of the breast, the lecturer states that no thought should be given to how the wound is to be closed, or how the tissues are to be brought together. The one thought that must govern the operator is the thorough removal of all the diseased parts. In this way alone can a cure be effected. The incisions must be kept well away from the disease. The cut should go down to the pectoralis major muscle. From this the fascia, the breast, and the superjacent skin can be peeled off towards the axilla. The fat and the glands in the axilla must be removed by means of the finger and the blunt dissector.

With regard to cancer of the lip, to excise a growth without removing the sub-maxillary glands and opening up that region is only to invite failure. These glands should be removed whether they appear to be diseased or not.

Cancer of the tongue is very malignant in character, and spreads rapidly in the lymphatics and to the lymphatic glands, but tends to leave distant organs. The disease should be removed thoroughly and as early as possible. The sub-mental, the sub-maxillary, and the upper and lower carotid lymphatics are to be dissected out, together with the sub-maxillary salivary gland, and the anterior triangle of the neck is to be left just as naked as the armpit is left after the complete operation for cancer of the breast. These structures may be removed at the time the tongue is excised by the sub-maxillary route, or ten days later. The operator need not clear out the carotid region in those cases where the disease is clearly one-sided, and there is no evidence of bilateral infection.

The lecturer refers to the "starvation treatment" of Dr. Dawbarn. By this method the arterial supply to the growth is all cut off. In the case of cancer of the carotid region or the jaw, the two external carotids. The growth is in this way starved. Some good results have been secured by this means, but it is very difficult of performance, and is not likely to become popular.

The injection treatment by Dr. Doyen is referred to, but regarded as a failure. This Paris surgeon claimed to have obtained a serum which exercised a marked influence upon cancerous growths. In the hands of several London surgeons no satisfactory results were secured.

THE MILK SUPPLY OF CITIES.

As milk is the food of infants and many invalids, it is necessary that the milk offered for sale should be clean and pure. It is a well-known fact that milk may be the means of carrying a number of diseases.

But apart from the diseases which may be carried by milk, it is necessary that the milk supply be under such inspection as will ensure its quality as a nutriment, as well as its purity from dirt and disease germs.

A number of cities have taken steps to secure a proper supervision of their milk supply. No one should be permitted to sell milk without a license, those securing a license must come under regular inspection, all dairies should be examined, samples of milk must be furnished at any time for inspection, and no milk should be offered for sale from a dairy where there is any form of contagious disease.

In several places where regular inspections have been made, it has been found that many samples of the milk offered for sale were dirty,

contained pus or bacteria, or were under the standard in. fat, albumen, sugar, etc. All this should be corrected and can be corrected; but there is only one way to do it, and that is to bring the business under proper control.

BERNARD SHAW ON MEDICINE.

Mr. Shaw has of late been staging some of his recent researches and investigations in medicine. It would appear that he has taken special pains to aim his criticisms against the studies on vaccines and opsonins. In "The Doctor's Dilemma" he introduces us to four characters, namely, the pathologist, the patient, the wife of the latter, and a physician.

In the staging of these persons, we do not think that Mr. Shaw does himself much credit, and certainly it would be something very difficult to do the new discoveries any harm. The *Boston Medical and Surgical Journal*, speaking of the efforts of Mr. Shaw, uses the following language:—

"We might observe with Touchstone: In respect that this is a play, full of incidents amusing to the physician, it is a very good play; but in respect that it is a criticism of things medical it is a very vile play indeed. We should find an extended consideration of it quite diverting. But our readers will do this very well for themselves, and we have certainly devoted to it as much space as it deserves. Suffice it to note that Shaw, a vegetarian to start with, an extreme and most bitter opponent of vaccination and vivisection, given as he is to the breeziest imaginable disregard of commonplace facts, the prince of quacks in literature, is not the kind of man from whom we would expect sane and wholesome criticism, either in medicine or in any other field."

The *Journal of the Am. Med. Association* comments upon the play thus:

"On the whole, Shaw does not appear to be successful as a critic of the men and methods of modern medicine. Abuses have from time to time existed in our calling, as in all others, and men like Hogarth, Molière, Dickens and Daudet have revealed them sanely and comprehendingly and with salutary results. No doubt there are abuses to-day which might fairly be set forth, but Bernard Shaw—vegetarian, anti-vaccinationist, antivivisectionist, antimoralist, extremist and paradoxist—is hardly the man for the job."

With this we may leave Mr. Shaw to merited neglect.

THE FATALITIES OF THE RING.

We do not see that medical journals have said much upon the brutalities of the ring, and the fatalities that occur, all too frequently, among boxers. The following item from the press despatches is interesting :

“More boxers were killed in the ring last year than in 1904 and 1905 combined. Five entirely unknown fighters died from injuries received in the ring in the year of 1904, and in the year following six men were killed. Last year the ring fatalities numbered fourteen.”

Medical journals, whose duty it is to safeguard, as far as possible, the health of the people, and advocate measures for the prolongation of life, should condemn such sports as are attended by such a high death rate. The witnessing of a contest between two professional boxers is not calculated to have an elevating tendency upon the onlookers. Were these contestants deprived of the publicity they now receive through the press, they would lose much of their evil influence. But many of our great papers, which will accord only a few lines to an important lecture on a leading topic, will give columns to the recitation of the minutest details of the ring.

NATURE'S AND THE DOCTOR'S FIGHT AGAINST INFECTIONS.

Bacteria and protozoa enter the body by different routes. The cholera bacillus enters through the intestinal canal, while the staphylococcus may enter by many doors. There is in bacterial infections a period known as the incubation of the disease, or the time from the entry of the infection until it accumulates numbers sufficient to cause pronounced symptoms.

The mode of spread in the infected subject varies a good deal. In one case the disease remains local, as a boil. In another the infection may spread by continuity, as in erysipelas or gonorrhœa. Or the infection may spread by metastasis, as in gonorrhœa, acute rheumatism, or suppurative processes. Then, again, the infection may become a general one in the blood, or true septicæmia. The same germ may be local in one case, or travel by metastasis in another, or become a general affection in a third, as is sometimes true of the gonococcus. It is noteworthy the affinity that certain organisms have for certain tissues—leprosy for the nerves, cholera for the intestinal epithelium, the gonococcus for the joints, etc.

The processes that go on during an infectious disease are the evidences of a struggle between the invading germ and the invaded host. These processes are of a biological character. It is the reaction of the invaded animal against the toxins of the invading bacteria that cause the symptoms of the disease. Some infections are acute, others chronic, and the same infection may be acute in one case and chronic in another.

Some persons possess a natural immunity to certain infections. Others possess the power of soon producing immunity if attacked by a germ disease. The way in which immunity is acquired varies. In some cases an antitoxine is produced, which neutralizes the toxins of the disease. In others a bactericidal substance which dissolves the bacteria, a bacteriolytic body. In the case of typhoid fever an agglutinating body is formed. Lately we have been learning about the opsonins which stimulate the white corpuscles to devour the bacteria.

Among the resources at the command of the physician or surgeon may be mentioned the need for keeping up the patient's health and resisting power. It is also possible in many cases to remove the infected area, and thus arrest the spread of the disease. It has been observed that large blood supply to the affected part is useful. This may be brought about by the application of heat. There is, therefore, some value in the poultice after all. Passive hyperæmia may be induced by obstructing the return venous flow, which brings about a congested condition of the part affected.

Specific sera have of late attracted much attention. All are familiar with the curative and preventive powers of diphtheria antitoxin. Some infections do not produce a true toxins, but rather poisons are set free from the dead bacteria of these diseases. This is the case with typhoid fever, cholera, gonococcus, streptococcus, and staphylococcus. In such a case there cannot be a true antitoxin, as there is no true toxin. So far, antibacterial sera are not very successful; and ordinary phagocytosis may not be equal to the task.

It is here that Professor A. E. Wright's vaccines come in to fill an important place. The dead bacteria are employed as the means of treating the patient, by injecting a certain number of the dead bacteria into his body. The endotoxins, set free from these dead bacteria, stimulate the production of opsonins, which in turn stimulate the phagocytes to eat up the living bacteria causing the disease. This treatment has for its basis the discovery of the infecting organism, making a culture of these and injecting them after they have been killed. It is necessary to watch the reaction.

The application of this treatment may be very wide. Such conditions as chronic rheumatism, arthritis deformans, and polyarthritis are usually due to some infection.

ANOTHER HOSPITAL ADVERTISING.

In our issue for January, we had occasion to call in question the propriety of the Toronto General Hospital issuing statements to the public press regarding what it was doing in the opsonic treatment of disease. We see that the *Montreal Medical Journal* looks upon the whole affair as being rather wide of our code of ethics.

In a recent issue of a newspaper there appeared three advertisements. The first was called "The Old Foggy Doctor," and set forth the claims of Drs. Kennedy and Kergan. The second was an appeal in behalf of the Hospital for Sick Children, Toronto. This appeal, among other things, exhibited to its readers three illustrations. One of these portrayed the nude form of a patient being massaged; the second one was a group of young persons taking dumb-bell exercises; and the third was a pair of club feet before treatment, and the same feet after treatment. The third advertisement was "Leibig's Fit Cure."

We would direct the attention of the profession to a little pamphlet called "The Booklet of a Charity." On the first page there is a picture of "Christ blessing little children," and on the second page a complete list of the trustees and medical and surgical staffs.

Following this are pictures of patients in various positions and having various things done to them. On page 21 there are three sets of club feet, in the truly before- and after-treatment style so familiar to the patent medicine man. On page 22 we are treated to some pictures of hare-lip. It is surely not asking too much to enquire if the medical and surgical gentlemen connected with the hospital have prepared this "booklet," or if they approve of its contents.

Now, we do not say a word against the Hospital for Sick Children. All praise for what it has done, but we do think that all this good should and could be done in a different manner. What would become of any physician or surgeon who got out such a "booklet" advertising his private practice or his private hospital if he conducted one? Why, he would be expelled from any medical society he belonged to, and would be debarred entrance into any medical body. But we cannot expel a hospital, and, therefore, the staff of such a hospital is in the position of receiving all this objectionable advertising free and escape responsibility.

If one will take the advertisements, which appear from time to time, of the Hospital for Sick Children, and also look at the "booklet," it will become apparent that the diseases and deformities treated in the institution are flaunted before the public—all too gullible at all times. Then in the same "booklet" is found a list of the physicians and surgeons who accomplish the marvellous feat of closing a hare-lip or straightening a club foot—things that are being done all over the country every day,

without all this notoriety through the agency of printers' ink. We hope we shall see less of this in future.

For the Children's Hospital we have nothing but good words; but let it do its good work without resorting to these unseemly methods.

PERSONAL AND NEWS ITEMS.

The board has purchased a site for \$35,000 for the Selkirk hospital.

Out of 775 deaths in St. John, N.B., last year, 90 were due to tuberculosis.

The Wingham Hospital, Ont., is to be congratulated on receiving many cash donations lately. This is a good practice to keep up.

In Nelson, B.C., the doctors have entered into an agreement not to make an examination for any life insurance company for less than \$5.

Two months ago Dr. J. R. Jones, of Winnipeg, met with a severe accident by being thrown from his sleigh. He is steadily recovering.

Spruce Hills' Sanitorium for Consumptives is now in operation. It is located near Winnipeg.

Dr. J. D. Monteith, of Stratford, has gone to Europe for a period of post-graduate study.

Dr. A. J. MacKenzie, Toronto, has been elected first vice-president of the Canadian Club.

Dr. J. L. Turnbull, who practised in Goderich for many years, has located in Listowel.

Dr. L. G. Stewart, a graduate of the University of Toronto, 1904, died recently.

Dr. Wilson, Norwood, Ont., was married a few weeks ago to Miss Smith, of Oshawa.

Dr. John Stewart, of Halifax, was in Toronto for a week, and was the guest of Dr. Primrose.

The Royal Columbian Hospital at New Westminster, B.C., will be erected soon at a cost of \$50,000.

The Regina Hospital directors have decided to ask for a grant of \$100,000 for the purpose of erecting a municipal hospital.

Dr. William Albert Kelly, of Florence, has been appointed an associate coroner for Lambton County.

Dr. George H. Carlisle, of Esterhazy, Sask., was married recently to Miss C. Thompson, of Cobourg.

Dr. Truax, of Vancouver, B.C., has handed in his resignation as Medical Health Officer. A motion was passed accepting, and appointing Dr. Pearson as temporary officer.

Dr. C. J. Fagan is still pursuing his project of a sanitarium for consumptives for British Columbia. He is meeting with encouraging success and is quite confident of the results.

Dr. Blackwell, who has been house surgeon for some time of Sarnia General Hospital, has resigned, and has accepted a similar position in Victoria Hospital, London.

In British Columbia there were 24 candidates for examination for the license to practise, and 15 were successful. Dr. Telford was refused reinstatement.

The Manitoba Medical College has entered into its new building, which furnishes very excellent facilities for teaching. There are 140 students in attendance, 35 being in their first year.

The old Toronto friends of Dr. H. P. H. Galloway will be pleased to learn that he has been appointed lecturer on orthopedic surgery in the Manitoba Medical College.

John W. Byers, who has been so favorably known as Professor of Obstetrics in Queen's College, Belfast, has been honored with knighthood.

The Hamilton Medical Society has elected the following officers for the year: President, Dr. Olmsted; Vice-President, Dr. Storms; Cor. Sec., Dr. Davey; Rec. Sec., Dr. S. R. Hess; Treas., Dr. McNichol.

The friends of Dr. Geoffrey S. Beck, of Port Arthur, will be glad to learn that he has quite recovered from his illness and is now in excellent health.

Dr. F. H. Scott, a graduate of the University of Toronto, who has been engaged in post-graduate work in Europe, has been awarded one of the Royal Society research studentships at London University.

The London Medical Society is making good progress this session. Dr. Seaborn is President, Dr. W. J. Stevenson Vice-President, Dr. Bateson Secretary-Treasurer.

Dr. F. Hershey Scherk, who has been taking a post-graduate course in New York for some time, has located in Toronto. He has sold out his practice in Campbellford. His address is 884 College street.

Hon. Dr. Reaume, Minister of Public Works for Ontario, had a close call at the G.T.R. at Glencoe. A yard engine ran into the west-bound flyer and a chair in which the Minister was seated became smashed, but he escaped with a shaking up.

A few weeks ago a deputation waited upon Sir Wilfrid Laurier, asking for a grant of \$3,000 to aid the Antituberculosis League. It was

stated that about 10,000 persons die annually of this disease. Sir Wilfrid said he would refer the matter to the Finance Minister.

Dr. Laberge, the indefatigable health officer in Montreal, continues his crusade against impure milk. He declares that the Federal and Provincial Governments should carry out milk inspection in such a manner as to prevent the sale of impure milk.

Fort William and Port Arthur have a medical society known as the Thunder Bay Medical Society. Meetings are held alternately in these towns. Dr. Birdsall, of Fort William, is President, and Dr. Pratt, of Port Arthur, is Secretary.

An active movement is on foot in Calgary to do away with lodge and contract practice. Dr. Lafferty introduced the subject at the Medical Society meeting. A committee was appointed which reported strongly against such practice.

The Medical Council for Alberta is as follows: Dr. Braithwaite, Edmonton; Dr. Hotson, Strathcona; Dr. Simpson, Lacombe; Dr. Brett, Banff; Dr. Lafferty, Calgary; Dr. Kennedy, McLeod; Dr. Newburn, Lethbridge. Dr. Braithwaite was elected President.

The City Council of Ottawa has decided to erect a sanatorium for consumptives. The Government will make a grant of \$4,000 towards the project, and allow \$1.50 per week per patient for the maintenance of the institution.

The Sanatorium for Consumptives at Weston is making good progress. Mr. Mulholland has donated \$10,000 for a cottage, and Mr. H. C. Hammond a similar amount for a second cottage. These cottages are for advanced cases.

The Sydney Mines, Nova Scotia, are having a hard time of it owing to smallpox. It appears that so many persons are unvaccinated in the district that the disease has got beyond the local authorities to control it. One more example of penny wise and pound foolish, or suffer much because the little pain of vaccination was not borne.

At a meeting of the Medical Association of Niagara Falls, Ont., held on the evening of January 2nd, it was unanimously agreed that the tariff of medical fees should be raised. The principal item of interest to the public is the increase for city visits between the hours of 8 a.m. and 10 p.m. The tariff for these is now \$1.50, instead of \$1 as formerly.

The officers of the Vancouver Medical Society for the current year are: President, Dr. J. Glen Campbell; Vice-president, Dr. A. S. Monro; Secretary-treasurer, Dr. J. M. Pearson; Library Committees, Drs. W. Stephen, R. E. McKechnie, Stuart A. Ross, W. D. Keith, and M. Brydone-Jack.

In Winnipeg the following officers have been elected to look after the affairs of the Medical Society: President, E. W. Montgomery; 1st Vice-president, Dr. J. R. Davidson; 2nd Vice-president, Dr. N. J. McLean; Secretary-treasurer, Dr. C. H. Vrooman; Councillors, Drs. McKenty, H. McKay, Galloway, and Todd.

The Thunder Bay Medical Association has elected the following officers: Hon. President, Dr. J. S. T. Smellie; President, Dr. C. J. H. Chipman; Vice-President, Dr. H. E. Paul; Secretary, Dr. J. D. Chisholm; Treasurer, Dr. Crozier, and Executive Committee, Drs. McGrady and McCartney.

With the January issue of the *American Journal of Dermatology and Genito-Urinary Diseases*, we notice some decided improvements. It has been enlarged in size and a number of additional pages added. Any one who is interested in the diseases specially discussed in its pages will find this journal all that could be desired.

Dr. F. J. Bateman, of Strathroy, is to be congratulated on his successful defence against the criminal action which was brought against him recently by a young woman who consulted him in his office, and alleged that he had attempted to take undue liberties with her. Dr. Bateman gave his denial in such a convincing and straightforward manner that the jury came to the decision of "not guilty" in 15 minutes.

When Dr. B. N. Wales left Bury for St. Andrew's, Que., a large number of citizens assembled to bid farewell to the popular doctor and addresses were delivered by the Rev. Messrs. C. B. Hasher, George J. Crabb and Major Dunsmore, after which Mayor Bennet, on behalf of the citizens of Bury, made a presentation of a gold-headed cane, accompanied by an address, expressing in warm terms their regret at his departure.

Winnipeg has a very poor water supply. On this subject the *Winnipeg Telegram* says: "It would be a remarkable state of affairs in a city of Winnipeg's aspirations and pretensions that mayors and councils may come and mayors and councils may go, and the metropolis of western Canada does not obtain a sufficient supply of clean water for the use of its people with what amounts to an epidemic of typhoid fever as an annual menace to the health of every household."

Western Canada Medical Journal is the name of the new journal that is to voice the needs and progress of the medical profession of the West. It is published in Winnipeg. The first number of the first volume is just to hand. The editor is to be congratulated upon its make-up. It contains a number of good original articles and a considerable amount of general news. The older journals can well afford to welcome this young journal to be one of their associates in working for the good of the medical profession. THE CANADA LANCET wishes it every success.

The sixth International Dermatological Congress will convene by special invitation in the city of New York on the 9th of September of the current year and will remain in session there for one week. The first congress of this kind met in Paris in 1889 and since that time at intervals of about three years it has been held in Vienna, London, Paris and Berlin. At the Berlin meeting in 1904 New York was selected as the meeting place for 1907, and Dr. James C. White, of Boston, was elected president of the Congress. An excellent organization committee has been appointed by him.

During the past year the City Relief Officer for Toronto had applications from 1,081 people for admission to hospitals in the city. By nationalities they numbered: Canadians 421, English 293, Irish 132, Scotch 59, other nationalities 176. In the matter of religion there were 709 Protestants, 258 Roman Catholics and 114 persons of other faiths. Seventy-six of the applicants had been in Toronto less than three months. All the applications were not honored, as in some cases the applicants were able to pay for hospital treatment, and in cases of some outsiders the granting of admission would have been regarded as an imposition on the city's generosity.

Professor Osler, when in Toronto a short time ago, gave utterance to the following language: "It is no credit to us in this country or to people on the other side of the line that typhoid fever still exists so generally. It is a reflection on the sanitary intelligence of the public. I do not say on the medical profession, for we have insisted that proper measures should be taken to stamp it out. But it is a reflection on the public which tolerates the present conditions. The conditions in England suggested this to my mind. There they have practically stamped out the fever through enforcing sanitary precautions. The whole sanitary conditions in that country are infinitely better than they are here. We may take typhoid fever as an index of a country's sanitary conditions and the conditions here are certainly not such as ought to exist."

The Canadian Medical Exchange, conducted by Dr. W. E. Hamill, Toronto, Medical Broker, for the purchase and sale of medical practices and properties, handles this class of business from the Atlantic to the Pacific and has done so for the past twelve years. The majority of the medical sales in Ontario have passed through his hands and many from the Maritime Provinces and the great North-West, hence we advise our readers, whether they be buyers or sellers, in whatever part of Canada they may reside, to take advantage of such an important central depot for this class of business, which is a very important department of medical affairs and is a specialty in itself. Many prospective purchasers are

registered with him to be piloted unto opportunities to buy a medical practice and vendors will find a short-cut to the goal desired.

Physicians who are interested in the study and legitimate practice of the physical (drugless) therapeutic methods, notably electro-therapy, photo-therapy, mechano-therapy, hydro-therapy, suggestion and dietetics, are invited to join the American Physio-therapeutic Association. Address the secretary, Dr. Otto Juettner, No. 8 West Ninth street, Cincinnati, Ohio. The officers for the ensuing year are: President, Dr. H. H. Roberts, Lexington, Ky.; Secretary, Dr. Otto Juettner, Cincinnati, Ohio; Treasurer, Dr. Geo. H. Grant, Richmond, Ind.; Executive Council, Drs. W. F. Klein, Lebanon, Pa.; Jas. Hanks, Brashear, Mo.; J. W. Unger, West Point, Miss.; Chas. S. Northen, Talladega Ala.; R. W. Gibbes, Columbia, S.C.; S. J. Crumbine, Topeka, Kans.; F. L. Keeler, Perry, Okla. Letters should be addressed to the secretary, Dr. Juettner, Cincinnati, Ohio.

CORRESPONDENCE.

Editor LANCET,—In the examination of stomach contents for free hydrochloric acid it is customary to titrate with a decinormal solution of sodium hydroxid. This necessitates a mathematical calculation after each titration. If, instead of decinormal solution, we use one containing 5.62 grams sodium hydroxid in a liter, and use 5 cubic centimeters of filtered stomach contents for the test; each cubic centimeter of the solution corresponds to one part of hydrochloric acid per thousand (1/m) or one-tenth of one per cent. (1-10 per cent.), and no calculation is needed. For example, 1.8 cc. solution indicates 1.8/m hydrochloric acid; a normal amount.

T. P. HALL.

937 Burrard street, Vancouver, B.C.

OBITUARY.

R. B. PRICE, M.D.

Dr. R. B. Price, aged 69 years, died in Chicago on the 2nd January, 1907, from pneumonia. Several weeks ago he was also stricken with paralysis while in Kingston. He practiced in Bath, Kingston, and Lonsdale. He was a Queen's graduate.

C. S. PARKE, M.D., C.M.

Dr. Parke, of Quebec City, died November 29th, 1906, in his 63rd year. The cause of death was inflammatory rheumatism. He graduated from McGill in 1866. At different times he was physician to the Jeffrey Hale Hospital, the Male Orphan and Finlay Asylum, and president of the Irish Protestant Benevolent Society, and president of several social and benevolent organizations. He received the Government medal and the Fenian Raid medal.

CHARLES NEVILLE, M.D.

News has been received of the death at Sutton, Surrey, England, on December 10, of Dr. Charles Neville. His wife, who is now in England, was Miss Beatrice Hatheway, of Toronto. Dr. Neville was for many years a physician in the employ of the Allan Line, and was a long time doctor on the steamship *Parisian*. He had many friends in Canada among the traveling public. Dr. Sterling, of Montreal, and Col. Peters, D.O.C., of London, are brothers-in-law.

J. G. HARDY, M.D.

Dr. J. G. Hardy, one of the best known physicians of the Moose Mountain district, Sask., died January 14th.

BOOK REVIEWS.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY.

All the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry and kindred branches; with over 100 new tables. By W. A. Newman Dorland, M.D. Fourth Revised Edition. Octavo of 836 pages, with 293 illustrations, 119 of them in colors. Philadelphia and London: W. B. Saunders Company, 1906. Flexible Morocco, \$4.50 net; thumb indexed, \$5.00 net. J. A. Carveth & Co., Toronto.

We have had the pleasure, for such it is, of reviewing this dictionary on a former occasion. From edition to edition the work grows in completeness and accuracy. It has now become a thorough table companion for every doctor. The meaning of the various terms are given in clear language and in terse form. The most standard methods are followed in the matter of pronunciation. The origins of the words are also fully-stated. We notice that the latest terms and many new words

find their places here. The author has displayed a keen sense of the due attention that should be paid to everything in the making up of such a work as this. There are a number of most useful tables throughout the book. The volume is well illustrated. The paper is good, but not too heavy, avoiding undue bulk in the book, which is bound in superior limp leather. It would be unfair to overlook the beauty of the colored plates and figures. It is a real pleasure to recommend this dictionary.

ATLAS AND TEXT-BOOK OF HUMAN ANATOMY.

Volume I., the Bones, Ligaments, Joints and Muscles. By Professor J. Sobotta, of Wurzburg. Edited, with additions, by J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy at the University of Michigan, Ann Arbor. Quarto volume of 258 pages, containing 320 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$6.00 net; Half Morocco, \$7.00 net. J. A. Carveth, Toronto.

This is the first volume of what purports to be a complete treatise on human anatomy. This volume deals with the bones, ligaments, joints, and muscles. This work is, as it claims to be, both a text-book and an atlas of human anatomy. The descriptions of the various structures are not lengthy, but they are particularly clear and accurate. As a work of reference, the text part of the work is a model, and enables the reader to find quickly what he may be in search of. The arrangement is scientific and simple. The plates could not be surpassed. The coloring is exquisite and delicate, and conveys to the eye a true impression of the various parts. The proportion and perspective of these plates also leave nothing for the hypercritical to demand. To render the study of the plates easy, there are marginal words and indicating lines. The paper used for the text part is of a high grade, and takes the type exceedingly well. The paper used for the plates is as fine as the art of paper-making can produce. We shall await with interest the forthcoming volumes. Of the present one we have only words of the kindest praise, for the author, the editor, and the publishers. They have all done their parts well. The editor has given us an excellent English translation of Dr. Sobotta's classic atlas of human anatomy. We wish every success to all concerned in this meritorious undertaking.

VON NOORDEN ON METABOLISM AND NUTRITION.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden. Authorized American Edition. Translated under the direction of Boardman Reed, M.D. Part VI. Drink Restriction (Thirst Cures). Particularly in Obesity. By Dr. von Noorden and Dr. Hugo Solomon. New York: E. B. Treat & Co. Pp. 86. Price, 75 cents.

This volume is devoted to the question of the value of restriction in the use of water, not of alcoholic beverages, in various pathological conditions, especially obesity. The first part contains an interesting historical review of the therapeutic employment of thirst-cures by Schroth, Oertel, and others. The second chapter contains an historical review of the physiological investigations on the effect of thirsting on the organism, particularly upon metabolism. This is followed by two chapters on the author's investigations on the effect of thirsting upon the metabolism of human subjects. The final chapter deals with therapeutic considerations, including the restriction of liquids in reduction cures, in chlorosis, cirrhosis of the liver, and hemorrhages. The volume reveals again the author's extensive knowledge of the literature of his subject, his wide clinical observation, and sound judgment.

GENITO-URINARY DISEASES AND SYPHILIS.

By Henry H. Morton, M.D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Surgeon to the Long Island and Kings County Hospitals, and the Polhemus Memorial Clinic. Illustrated with 158 half-tone and photo-engravings and 7 full-page colored plates. Second Edition, Revised and Enlarged. Royal Octavo, 500 pages. Bound in extra cloth. Price, \$4.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

To those who are interested in the subject of genito-urinary diseases and syphilis, here is a good book of them. It covers the diseases of the penis, urethra, prostate, seminal vesicles, bladder, kidneys, testicles, and deals fully with gonorrhœa, syphilis, chancroids, stricture, sterility, etc., etc. The illustrations are good, and the general make-up of the book all that could be desired. The advice on treatment is sound, and the teachings on pathology up to date. This is a first-class treatise on these diseases.

STENHOUSE AND FERGUSON'S EPITOME OF PATHOLOGY.

By John Stenhouse, M.D., of Toronto, and John Ferguson, M.D., Toronto, Canada. 12mo., 285 pages, amply illustrated. Cloth, \$1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1906. (Lea's Series of Medical Epitomes. Edited by Victor C. Pedersen, M.D.)

Drs. Stenhouse and Ferguson devote the first half of their work to *General Pathology*, after which the *Special Pathology* of the various organs and systems is considered. This arrangement conforms to the modern method of handling the subject, so that this excellent epitomization will serve not only the student in acquiring a well assorted knowledge, but also the practitioner who desires to post up on the leading

points. Mastery of the information so easily presented in this compact volume will qualify its readers on the essentials of the subject and facilitate the work of those who desire to pursue it further in the larger treatises. The series of which this is one is nearing completion. Twenty are now ready, and the volumes on the Nose and Throat, Hygiene, and Gynæcology will soon follow. The series make a handy and very useful working library, covering the various fields in a brief, but reliable manner. The well-known publishers (Messrs. Lea Brothers & Co.) have done the medical profession a real service by the publication of these most useful volumes.

DISEASES OF DOMESTIC ANIMALS.

Report of J. G. Rutherford, V.S., the Veterinary Director General of the Department of Agriculture of Canada, 1905. Ottawa: S. E. Dawson, Printer to the King's most Excellent Majesty.

This report gives a good account of what has been practically accomplished in the study and control of the diseases affecting horses, cattle, swine and sheep. Very full attention is given to such diseases as tuberculosis, glanders, anthrax, dourine, mange, rabies, hog cholera, etc. When we remember that the horses, cattle, sheep and swine are said to be worth \$1,040,410,916, the importance of their health becomes apparent.

DISEASES OF THE LUNGS.

Lectures on Diseases of the Lungs by James Alexander Lindsay, M.D., F.R.C.P., M.A.; Professor of Medicine, Queen's College, Belfast; Physician to the Royal Victoria Hospital, Belfast, etc., etc. Second edition, enlarged and rewritten. London: Bailliere, Tindall & Cox. Toronto: J. A. Carveth and Company. Price \$2.50.

This excellent work on the diseases of the lungs is now in its second edition. It has been carefully revised and enlarged. This edition is confined entirely to the diseases of the lungs and pleura. The first part is devoted to the methods of diagnosis. On the various diseases the author is full and explicit in the matters of diagnosis and treatment. Speaking of tuberculosis, he says that it runs strongly in families. He also holds that it may be transmitted by inoculation. The most frequent method of spreading the disease is by fine particles of dust in the air. The views that the disease is spread by milk and meat are not much favored. On the subject of asthma the author makes the remark that "the proximate cause of the asthmatic paroxysm is spasm of the muscular fibres of the bronchioles, with or without a concomitant broncholitis exudativa; but

other authorities regard it as depending on a fluxionary hyperæmia of the bronchial mucous membrane." He goes on to say that the nervous factor plays an important part in asthma, but it is not clear whether it does so through the muscle fibres of the bronchi, or through the vasomotor mechanism. On the subject of treatment the author pursues a conservative and safe course. Much attention is given to those methods of treatment other than the administration of drugs. We can speak in very high terms of praise of this book.

POTT'S DISEASE.

The Rational Treatment of Potts' Disease after the Usage of Practitioners. By Dr. F. Calot, Surgeon-in-Chief to the Rothschild Hospital, to the Hospital Cazin-Perrochand and the Orthopedic Institute of Berck. With 120 figures in the text. Paris: Octave Doin. Price 3 Francs.

A few years ago the name of Calot was familiar as that associated with the forcible extension of the curvature in Pott's disease. The present small volume is divided into the four parts: The treatment of the curvature, the treatment of abscess, the treatment of paralysis, and an appendix on diagnosis. This paper-covered brochure does good service by once more going into the subject of Pott's disease. Dr. Calot still adheres to the value of reducing the deformity in slight and medium sizes. He goes into the method of doing this so as not to injure the parts, and points out how to maintain the corrected position. The remarks on the early diagnosis of the disease are very helpful and suggestive. A good deal of very valuable information is given on the subject of plaster jackets, etc., and on the management of abscesses when such occur.

SURGERY: ITS PRINCIPLES AND PRACTICE.

In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Vol. I: Octavo of 983 pages, with 261 text-illustrations and 17 colored plates. Philadelphia and London: W. B. Saunders Company, 1906. Per volume, cloth, \$7.00 net; Half Morocco, \$8.00 net. Toronto: J. A. Carveth & Co.

This is the first volume of what purports to be a superb work on surgery, a true *magnum opus*. There will be five volumes and over 4,000 pages in the completed work. The contributors to volume one are J. G. Adami, J. B. Sutton, G. W. Crile, J. C. DaCosta, J. C. DaCosta, jr.,

C. H. Frazier, Leonard Freeman, L. Hektsen, E. Martin, J. G. Munford, E. H. Nichols, E. A. Smith, and F. C. Wood, jr. This takes up the history of surgery, surgical physiology, pathology, infections, tumors, and wounds. This covers the ground of general surgery. All the contributors to this volume are recognized authorities on the subjects they take up in the volume. The editor, Dr. W. W. Keen, is to be congratulated on securing the co-operation of such an able staff of associates in the production of this volume. It is quite impossible to enter into detail in this brief notice, but we would say with much pleasure everything that could be done by editor, contributors, and publishers has been done to give the profession a work on surgery than which there is none better. Indeed, there is evidence on every page that it has been the desire of all to make this the leading work on surgery. As a book it is handsome in every detail, and as an authority on surgery it is beyond question.

HYGROMEDRY.

Hygromedry, 4th edition, revised, enlarged, with many new plates. Copyright, 1906, by H. E. Wetherill, M.D., Philadelphia. Published and illustrated by the Author. All rights reserved. Price, \$2.50. Press of W. Ellis Johnson & Co., 217 Walnut Street, Philadelphia.

The author of this unique book is a member of a number of the leading medical and scientific societies in the United States. There have been at various times attempts made to devise instruments that would quickly determine the degree of moisture in the air. These instruments have been improved upon to a very great extent by the Hygromed of Dr. Wetherill. It consists of a case of aluminum and a dial of firm, transparent celluloid. There is in the instrument a fine copper spiral over which is stretched a very hygroscopic membrane, such as dried egg-skin, gelatin, or albumenized paper. The moisture from the person's body enters the openings in the base and acts upon this hygroscopic membrane, and the indicator points to the moisture recording figure on the dial. The instrument is very ingenious, and has been shown to be of much clinical value. It is such a device as should be in every hospital and many physicians would derive help from it.

THE HARVEY LECTURES.

The Harvey Lectures delivered under the auspices of the Harvey Society of New York, 1905-1906. Philadelphia and London: J. B. Lippincott Company.

There are thirteen lectures in this volume. These lectures have appeared at different times in full or in abstract in medical journals. It

is a real pleasure to find them collected into one convenient volume. The subjects discussed are of the utmost importance. The lecturers are gentlemen of the highest standing, and the work is well illustrated. It is a very valuable book.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., and H. R. M. Landis, M.D. December, 1906. Lea Brothers & Company, Philadelphia and New York. Price, \$6.00 per year.

This quarterly issue deals with diseases of the digestive tract, by Dr. Steele; genito-urinary diseases, by Dr. Belfield; kidney diseases, by Dr. Bradford; anæsthetics, fractures, etc., by Dr. Bloodgood; and practical therapeutics, by Dr. Landis. These articles are excellent and give a thorough digest of all the recent advances. The present number is in keeping with the very high standard of the whole series.

INTERNATIONAL CLINICS.

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynæcology, Orthopedics, etc., etc. Edited by A. O. J. Kelly, A.M., M.D. Vol. IV, sixteenth series, 1906. Philadelphia and London: J. B. Lippincott Company. Price, \$2.25.

The fourth volume of the sixteenth series has just come to hand. This series of quarterly volumes is so well known that it is scarcely necessary to introduce it now to our readers. Each volume seems better, if possible, than its predecessors. The present volume is a very useful one, and contains much valuable matter, and well arranged. The choice of subjects is good, and these have been placed in the hands of those well calculated to do them justice.

TUMORS OF THE CEREBELLUM.

The Focal Diagnosis and Surgical Treatment of Tumors of the Cerebellum, by Drs. C. K. Mills, C. H. Frozier, W. G. Spiller, G. E. DeSchweinitz, and T. H. Weisenburg. For sale by Edward Penneck, 3609 Woodland Ave., Philadelphia.

These lectures are reprinted from the *University of Pennsylvania Medical Bulletin* of April and May, 1906. These lectures, seven in number, are an able exposition of our knowledge on the subject of cerebellar tumors. The book is well illustrated and handsomely got up in every way. We can recommend it with confidence.

PETERSON'S OBSTETRICS.

The Practice of Obstetrics. By Eminent Authorities. Edited by Reuben Peterson, A.B., M.D., Professor of Obstetrics and Diseases of Women in the University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich. Large octavo, about 1087 pages, with 523 engravings and 30 full-page plates in colors and monochrome. Cloth, \$6.00 net; leather, \$7.00 net; half morocco, \$8.00 net. Lea Brothers & Co., Philadelphia and New York, 1907.

With the volume edited by Prof. Reuben Peterson, "The Practitioner's Library of Gynæcology, Obstetrics and Pediatrics" is completed. It is fully up to the high standard set by its companions, the "Gynæcology," edited by Bovée, and the "Pediatrics," by Carr. The profession now has at its command in convenient form an authoritative exposition of the latest and best knowledge upon three closely interrelated and important specialties. The basic subjects of applied pathology and etiology are considered with sufficient fulness to lay the foundation necessary for a fruitful understanding of the practical aspects, to which major space is devoted. Each author has woven in his own observations of disease and the therapeutic measures which have resulted in the greatest success. This adds to each chapter a personal element of obvious value. In view of their particular importance in obstetrics, the series of illustrations has been made exceptionally rich, and it is likewise notable for being largely from original photographs taken from life. The facilities at Dr. Peterson's command have rendered it possible to an unusual degree to make selections specifically representing points in the text. Though it is to the interest of every practitioner to have this well-rounded and compact library at hand, the volumes are sold either together or separately.

 PROFESSOR SHOEMAKER'S MATERIA MEDICA AND THERAPEUTICS.

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association and the British Medical Association, Fellow of the Medical Society of London, etc., etc. Sixth edition. Thoroughly revised. (In conformity with latest revised U. S. Pharmacopœia, 1905). Royal octavo, 1244 pages. Extra cloth, price, \$5.00 net. Full sheep, price, \$6.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

This is one of the most complete books we have ever reviewed. There appears to be nothing omitted. The volume contains 1,254 pages, and yet is not too bulky, because the paper is thin and of very high grade quality. The book is full of tables, and suggestions of the greatest value. It is specially complete on the practical side, the notes on therapeutics being very full. This is just such a book as every doctor needs.

SYLLABUS OF LECTURES ON HUMAN EMBRYOLOGY.

An Introduction to the Study of Obstetrics and Gynæcology for Medical Students and Practitioners; with a Glossary of Embryological Terms. By Walter Porter Manton, M.D., Professor of Clinical Gynæcology and Professor Adjunct of Obstetrics in the Detroit College of Medicine; Fellow of the Zoölogical Society of London, of the Michigan Academy of Sciences, etc., etc. Third edition. Revised and enlarged. Illustrated with a colored frontispiece and numerous outline drawings. 12mo., 136 pages; interleaved throughout for adding notes. Bound in extra cloth. Price, \$1.25 net. F. A. Davis Company, 1914-16 Cherry Street, Philadelphia, Pa.

While this work is specially designed for, and will be found particularly useful to students in their first and second years at college and is likewise a desirable manual for review and reference for the general practitioner, it is not intended to take the place of the exhaustive text-books on embryology, but is primarily for use in the class room supplementary to the lecture and for laboratory guidance. It can also be used for self-instruction and in laboratory work in connection with the usual text-books. We have had the pleasure of reviewing this work on a former occasion, and can congratulate the author on the favor with which it has been received, and on his efforts to keep it abreast of the times in all particulars.

 MESSRS. SAUNDERS COMPANY'S CATALOGUE.

W. B. Saunders Company, of Philadelphia and London, have just issued a revision of their handsome illustrated catalogue of medical, surgical, and scientific publications. Beyond question this is the most elaborate and useful catalogue we have ever seen. The descriptions of the books are so full, the specimen illustrations are so representative of the pictorial feature of the books from which they are taken, and the mechanical get-up so entirely in keeping with the high order of the context. The authors listed are all men of recognized eminence in every branch and specialty of medical science. The catalogue is well worth having, and we understand a copy will be sent free upon request.

 BLAKISTON'S VISITING LIST FOR 1907.

This excellent visiting list is as attractive this year as ever. It contains much useful information in convenient form. It should find a place in the pocket of many a practitioner. It is published at the moderate price of one dollar.

BLAKISTON'S NEW BOOK.

Timeliness of interest, aside from any other condition, lends especial importance to the announcement of the early publication of "Foods and Their Adulterations," by -Harvey W. Wiley, M.D., to be immediately followed by a companion volume, "Beverages and Their Adulterations." Dr. Wiley is Chief Chemist to the United States Department of Agriculture, at Washington, and his wide researches in the interests of purity in food commodities give anything he might write on the subject an authoritativeness that is unquestioned. The fact that the new National Food and Drugs Law becomes effective after January 1st, and that public interest in it is now at white heat, will no doubt result in quite a demand for both volumes. The books will be generously illustrated from original photographs and drawings.

MISCELLANEOUS.

HALF-COOKED STARCHES A CAUSE OF INDIGESTION.

Digestive disturbances are due more frequently to failure of digesting carbohydrates than of other food products. Raw starch is particularly indigestible, the heat of cooking being necessary to break up the granules and to perform the first three of the five steps of starch digestion, after which the formal digestive juices will complete the work. The method of cooking is very important as most cases of amylaceous dyspepsia are due to eating improperly cooked starches. Here is best seen the beneficial results of the extended steam cooking through which Egg-O-See is put, the free action of the diastase ferment and the baking at high temperature. Toast is considered more digestible than bread as it is baked *en masse* and then dry cooked in slices. *Each flake of Egg-O-See, thin as fine paper, is toasted* to a crisp and delicate brown. These dry flakes are so readily affected by the ptyalin that the final transformation of starch into grape sugar in the intestines is so easily accomplished as to cause no distress to the patient who finds it impossible to eat bread and other cereal foods which are not only difficult of digestion but cause painful fermentation. Egg-O-See is so easily digested that it is of special service to the dyspeptic, to those convalescing from acute diseases, in pregnancy where nausea and vomiting are easily induced by food, and in other forms of gastric neuroses.

Doctor, if you have not eaten Egg-O-See, a sample package will be sent free on application to the Egg-O-See Cereal Co., Quincy, Ill.

JUST HOW TO MANAGE OTORRHŒA.

By F. E. BURGEVIN, M.D. of Spiro, I. T.

(Published by the *Kansas City Medical Record*, July, 1906.)

Otorrhœa, from purulent middle-ear catarrh, the "running ears" of the laity, was at first my *bete noire*. I used the classic treatment of Pomeroy and others—syringing, insufflations of powdered boric acid, etc., sometimes with *benefit*, sometimes the reverse, but never by any chance *curing* any of them, until I dreaded to see a patient with cotton in his ears come into the office. Now I cure them in a few days or etc., sometimes with *benefit*, sometimes the reverse, but never by any other. When I was at the Manhattan Eye and Ear Hospital in 1890, Dr. Pomeroy said that one case had been under treatment nearly ten months and was *slightly improved*. He said that it required one or two years to cure this disease. and then it generally returned.

My method of treatment is as simple as it is effectual, and any doctor after reading my description attentively can use it as well as I can and cure every case. Once daily I fill the ear with a warm solution of some good peroxide of hydrogen, beginning with a 25 per cent. solution, and increasing the strength every day until the pure drug is used. Hydrozone is the same, only twice as strong, and I use it when I can get it simply from motives of economy. After cleansing the ear thoroughly, which at first may require from twenty minutes to two hours, according to the foulness of the auditory canal, I then instill a few drops of Glycozone (warmed) and close the canal securely with a bit of absorbent cotton. This is allowed to remain *in situ* until the next treatment.

The first cleansing should be very thorough, the peroxide being repeatedly instilled until all foaming ceases. In some cases it may require two, three or more treatments to cleanse the ear properly, especially if the lumen be occluded by a furuncle, or by swelling, or inspissated discharge. Do not be discouraged by any little difficulty like this, keep right on and you will finally succeed in getting the ear *clean*. After that, it is plain sailing. Thenceforth the daily treatment need not consume more than ten to twenty minutes. It is better to treat the case every day, but I have had good success with patients who could not come oftener than once a week. Do not give the patient medicine to use at home and expect to cure him; and never tell him what you are using.

In children who dread the procedure, I do not attempt much the first time or two, but strive to win their confidence, which is not ordinarily difficult, as the treatment is not at all painful and is always followed by a certain sense of relief, so that children who were in mortal

terror of me at first will, after a few treatments, come to me of their own accord. Even babies of one and two years who would not suffer me to touch them at first, after experiencing the grateful relief afforded, will place the head on the chair in the proper position and gladly submit to the treatment.

When the diseased ear has once been thoroughly cleansed I consider my work is half done. Thenceforth improvement is usually very rapid, even old inveterate cases yielding in a few weeks. Relapses occur, but are easily managed, and I have seldom had a second relapse. Of course, mastoid disease, necrosis, polyps, etc., must receive appropriate treatment; but I have no hesitation in saying that all simple, uncomplicated cases (which include the vast majority of all cases under one year's duration) may be cured by this treatment if it is properly and thoroughly carried out.

Care must be taken to have the medicaments *warm* and not too hot—100° F. is about right—and to always stop up the ear with a bit of aseptic cotton before permitting the patient to leave the office. Be careful to use a piece of cotton just the right size to securely close up the meatus; if too large it will work out, allowing the solution to escape and leaving the ear unprotected; if too small it will slip back into the canal and so fail of its effect.

Never syringe the ears in otorrhœa; it is risky and useless. I usually drop a little warm solution of sodium borate—5 per cent.—in the ear to prevent a slight stinging which sometimes ensues when active steps are taken. I also dry out the canal with cotton on an applicator, but this should be very carefully done with speculum, and the canal well lighted. These points are non-essentials, merely refinements which render the treatment a trifle more pleasant, perhaps, that is about all.

The general health will probably require overhauling, indications being met as they arise. It is a good idea to regulate and antisepticize the bowels as a routine measure, using salines and intestinal antiseptics—*e.g.*, the sulphocarbolates as needed. In the South especially, malarial and other miasmatic affections will often need looking after; also any other existing disease may require attention, but it is presumed that the practitioner will know how to handle these.