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Original Communications

SERUM TREATMENT OF LOBAR PNEUMONIA

JAMES H. DUNCAN, M.D., CHATHAM.

The paralyzing multiplicity of the treatments advocated for that formidable disease, "Acute lobar pneumonia," is such that it tends, at first, to drive most thoughtful young practitioners into the unfortunate position of Nihilism, expressed in the oft-repeated dictum, that "No treatment materially affects the course of the disease." It seems to me that later thought and experience should lift us beyond this attitude of negation, and each worker should catch some light from his experience to show him "a more excellent way."

Previous to the introduction of pneumolytic serum, my own experience has led me to accept and follow out the treatment by free elimination of toxins, through the emunctories, especially by the skin. If free sweating can be commenced in the early days of pneumonia, and constantly maintained, the disease will terminate by lysis, and never reach the critical crisis period. There are a few cases, more frequently among children, in which sweating by any safe method cannot be attained, and these are generally exceptionally severe and serious ones.

For the past two years and a half, while not forgetting or neglecting elimination, I have been using pneumolytic serum, as produced by Stearns, and it is with the object of giving my experience with this method of treatment that I take up my pen at present.

During the above-mentioned period I have used, myself, or advised the use of a serum in over twenty cases of well-marked lobar pneumonia, a brief account of the more typical of which I give below—two exceptions to the otherwise invariably successful issue have occurred, but not unexpectedly.

The first case in which I used the serum was in a man of forty years—large and muscular, but subject to attacks of very severe bronchitis, which ordinarily recovered slowly and often developed a distressingly spasmodic character. The patient had suffered for a week with la grippe, before the initial pneumonia chill developed, but had not been under medical observation. The chill was very violent and prolonged, and the fever, when I saw the patient, twenty-four hours later, registered 105 in the mouth, the pulse was 80 full and bounding, respiration 40 and painful, on the right side—fine crepitation over the right lower and middle lobes was remarkably well defined. The patient was not only distressed, but very anxious, as one of his brothers had died of a right-sided pneumonia two years previously, and another the previous year had barely struggled through an attack to a slow, tedious convalescence. In addition to the usual vigorous elimination, I gave 10 c.c. of pneumolytic serum. The following day I found temperature 103, pulse between 75 and 80, respiration down to thirty, cough was loose, sputum beginning to be rusty, and sweating abundant. I then gave a second 10 c.c. of serum. Twenty-four hours later I found temperature 100, pulse 72, and respiration still 30, with very abundant rusty sputum, while imperfect consolidation clearly marked out the middle and lower lobes of the right lung; the recovery after that was uneventful—the case terminating as an ordinary cold might, without recurrence of rise of temperature or any other distressing symptom, although the rusty sputum lasted nearly the week.

The second case occurred in a young girl of eighteen years of age. I saw her four days after the initial chill. The girl was very slight and delicate and much depressed from previous la grippe—pleurisy was marked and distressing, while dull percussion and bronchial breathing over basal right lobe showed well-developed pneumonia, temperature 103.2, sputum was markedly rusty. I gave serum at once, and twenty-four hours later found symptoms much alleviated. I did not give a second dose, which I now know was a mistake; the patient, however, recovered slowly without crisis and without complication.

Shortly after the above case occurred I was called up by phone by a fellow-practitioner in a neighboring town. The message ran as follows: "Can you give me any suggestions for the treatment of pneumonia? I have a case here about which I am very anxious, a most valuable life, the mother of six small children. She is very sick. The type of disease seems very severe. I have just lost a young, vigorous man from a similar attack." In answer to this request I advised the use of serum and sent

over two packages. Sometime later I received the report of this case, which was, in brief: "After the first dose distinct amelioration of the symptoms occurred, and after the second all cause for anxiety disappeared." The same gentleman consulted me regarding pneumonia in an old man nearing eighty years of age—it was early in the case, and I received no details excepting that the serum was used and the result was satisfactory.

In selecting from the cases in which I have used the serum my effort is, as far as possible, to give those which differ as much as may be as to conditions and time.

About a year after beginning to use the treatment I was called to see, in consultation, a boy of ten years; he had been ill with high temperature, but ill-defined symptoms, for several days; respiration was about 40, pulse quite rapid, and temperature 104. On very careful examination I was able to define an area of suppressed breathing, with some fine crepitation at the right base—in a few hours the physical signs became unmistakable, with a rising temperature. We had to wire for serum, which was administered the following morning; the usual course resulted; distinct relief occurred after the first injection, while the second dose was followed in a few hours by a fall of the temperature to 100, with corresponding improvement in all other symptoms, and an uneventful recovery followed.

Shortly after the last-mentioned case I saw another, through the kindness of Dr. McDonald, of Dresden. The case, as I remember it, had been in progress for at least six days; the patient, a previously healthy young lady of sixteen or seventeen, was in rather a desperate condition, extensive general bronchitis, with left-sided basal pleuro-pneumonia, respiration was very rapid, great cyanosis; rapid, feeble and unsteady pulse, temperature 103. With some doubt and hesitation we used the serum; quite marked improvement seemed to follow the next day, but symptoms remained urgent for days, and convalescence extended over weeks and months, and, indeed, was not complete for over a year. This, however, was due to the pleurisy. Intense pleural thickening developed, with the usual very slow return to normal temperature and pulse rate. The only value the serum had in this case was to modify one factor in a most serious complication, and thereby turning the scale, if it were but by a hair's breadth, in favor of life.

My series includes two other cases of pleuro-pneumonia, both in children under seven years of age; in both of these the result of the serum was prompt, but disappointing on account of the pleurisy, which caused considerable lengthening out of the fever-

ish period, and produced a slow and anxious convalescence.

There is one case which I should have mentioned, seen with me by Dr. Dwyer, of Toronto, and Dr. Sullivan, of Chatham, in which the serum produced very remarkable improvement, but in which the slow resolution and pleural thickening rendered the patient's state very critical for a long time. Recovery, however, has since been complete.

The two cases in which no special good seemed to result from the treatment were both such that we had no right to expect results. The first patient was a woman about fifty years of age, a case of chronic tuberculosis. The lower lobe pneumonia had reached the ninth day, the temperature was not high, the pulse bad, and respiration much embarrassed, both apices were full of moist râles, and distinct evidence of commencing trouble in the previously uninvolved base—the only reason for suggesting the serum was the hope that the fresh development might be arrested. The patient, however, died within a few hours of the time I saw her. The other fatal case was a colored child, six years of age, small and deformed as the result of spinal caries. An attack of measles had merged into one of extensive general bronchitis, with a consolidated left base. Beyond a slight lowering of temperature, no result seemed to follow the serum treatment, and death followed within thirty-six hours of my first seeing the patient.

In conclusion I would say that my two years and a half of treatment of lobar pneumonia by pneumolytic serum has convinced me:

1. That this method is of real and great service in shortening the period of disease—in stopping it before the critical crisis arrives, and in favoring a brief and uneventful convalescence.

2. That serum is probably of slight value, if any, after the sixth day of the disease.

3. I have only once found it necessary to give more than two injections, that is, twenty cubic centimeters of serum, and that one case was so badly complicated with pleurisy that no satisfactory conclusion could be drawn. When I gave the third injection the pleuritic were by far the predominant symptoms and seemed little affected by that dose.

THE RELATION TO EXTERNAL EYE AND ORBITAL DISEASE OF DISEASES IN THE NOSE, THROAT AND EAR*

COLIN CAMPBELL, M.D., TORONTO.

It is not so very long since ophthalmic surgeons were also general surgeons, and the work of such men as Bowman, Hutchinson and Tay show the advantages they possessed even in their day by examining all parts of the body. The amount of literature on the present subject now appearing shows that ophthalmologists are again awakening to the need of a broader view of their responsibilities. The day of indiscriminate mercury and pilocarpine lingered too long with us. To-day we want to know in each case the cause of eye disease, and, more and more, we seek it in other parts of the body. The bacteriology of the eye is doing much to point to cause and treatment, for the similarity of the fauna of the eye with that of the nose and mouth is striking. The relation of staphylococcal infection of the conjunctiva and cornea with adenoids and nasal suppuration is well known. The pneumococcus, by far the most important organism in the etiology of hypopyon ulcer, and of disease of the lacrymal sac, and a frequent cause of conjunctivitis, is usually to be found in the mouth; whereas Axenfeld was able to find it only twice on healthy conjunctiva, in fact only the zerosis bacillus and the staphylococcus albus are to be found thereon. The diplococcus of Morax and Axenfeld, the common cause of chronic and angular conjunctivitis, and of catarrhal ulcer of the cornea, was found by Treacher Collins in the nasal secretion of 125 of 300 school children with conjunctivitis, and Erdmann found them in 64 out of 142 noses, the majority apparently healthy, without co-existing conjunctivitis. He showed that they could live in dried nasal secretion for several days, and proved by inoculation that they still maintained their virulence. Axenfeld found them in sores at the angle of the mouth.

In many such cases the nose should obviously be treated also. Infection of the conjunctiva, however, is not easy. Bach has shown that bacteria cannot ascend the healthy nasal duct, although inflammation can extend *in continuo*, and nasal infection, by obstructing the tear passages and producing hyperaemia of the conjunctiva predisposes it to infection. Diphtheria rarely

*Read before the Section of Ophthalmology and Oto-Laryngology of the Academy of Medicine, Toronto, December 16, 1909.

attacks the conjunctiva, and the same may be said of the bacillus of influenza. The streptothrix found in canalicular concretions is not identical with the leptothrix buccalis. Tubercular infection of the conjunctiva is more commonly endogenous than ectogenous. The handkerchief is undoubtedly a frequent medium for transmission, and there is another way in which the nose is responsible for epidemics, *viz.*: the infective agent passing down the tear duct is scattered broadcast by sneezing and coughing. Lacrymal sac infection from the nose is also made difficult by the different ways in which their mucous membranes react to the same organism. They would appear to possess different affinities or receptors. The sac is relatively immune to the gonococcus, and even the pneumococcus, the most common organism found, requires assistance, such as the stoppage of the duct by nasal conditions. Whether tuberculosis of the sac originates more frequently by blood infection or from the nose or conjunctiva is unsettled. In a young man on whom I recently operated the nose presented the typical appearance of lupus involving the anterior half of the inferior turbinal and floor of the nose, and on the same side a boggy lacrymal mucocele. Tubercle bacilli were found by Dr. Archibald in sections from the turbinal, yet the sac when excised showed only the changes of simple inflammation. Here all the conditions necessary had existed for months, yet infection had not taken place.

Orbital complications of infectious diseases formerly considered metastatic, are now known to be due to infection from the accessory sinuses.

Even the orbital cellulitis of infants need not, as stated by Axenfeld, be excepted, for the ethmoidal cells are present at birth. Tubercular periostitis of the orbit is usually due to metastasis by the blood stream, but purulent periostitis of such origin is rare, and cellulitis extremely so. The bacteriology of orbital cellulitis is identical with that of nasal sinus disease.

Fetid antral empyaemata, which are so often due to carious teeth, contain pyogenic and putrefactive organisms, but non-fetid cases contain no putrefactive germs. Pneumococci are nearly always present, either alone or with streptococci or staphylococci. Other organisms are rare.

Extension to the orbit may be by the venous channels or by necrosis of the intervening bone plate and periostitis. Thrombophlebitis ophthalmica can also be due to thrombosis of the cavernous sinus, itself infected from a septic nose, mouth or ear. The only case I have ever followed proved post-mortem to be infected from the posterior ethmoidal cells, and that was in a

child of ten. I once saw a tonsillitis prove fatal with orbital signs of phlebitis. Infection from the pharynx would here be by the pterygoid plexus. The absence of valves permits the extension of infection *via* the petrosal sinuses from the middle ear and mastoid to the cavernous sinus, and is apt to show it by causing paralysis of the sixth nerve. Exophthalmos in such cases probably always means extension to the orbital veins.

That optic nerve inflammation and atrophy is sometimes due to nasal diseases is undoubted. Exophthalmos is usually present. The nerve is more nearly related to posterior ethmoidal than to the sphenoid, in fact the periosteum of the canal is merely the dura of the nerve, and Onodi found actual openings in the bony wall in many cases. De la Personne believes that most unilateral optic neuritis is due to nasal disease, and there has been much literature recently in support of this view. My own experience has not borne this out, as in two recent cases of acute unilateral retrobulbar neuritis in my own practice no evidence of nasal disease could be found. Both had progressed from central scotoma to nearly total blindness in a few days before showing optic neuritis, and both recovered spontaneously in a short time. Parsons, Snell and others report cases of orbital cellulitis and optic neuritis from carious teeth and following extraction. Involvement of the third nerve from cerebral disease of otitic origin is undoubted, but whether it occurs without other cerebral involvement is open to question.

I can quote the co-incidence of a septic polypus-filled middle ear, with total third nerve paralysis and slight optic neuritis on the same side, and to-night I showed a man with ophthalmoplegia interna in the left eye and till recently a septic right ear. In neither case could other cause be found.

Lagophthalmos, due to facial paralysis, I have seen follow operation for acute frontal sinus disease. The same condition after mastoid operation we have all seen. Politzer says it is rare after mastoiditis *per se*, but that he has seen slight transient paralysis during acute otitis media. I last week saw a child aged four who had developed facial paralysis during the first week of otitis media complicating scarlet fever. The ear was filled with fetid debris, and the lining was necrotic. She died two days later.

Selected Articles.

THE DOMINANCE OF ETIOLOGY IN MODERN MEDICINE*

BY MITCHELL BRUCE, M.D.

INFECTION AND IMMUNITY.

Medical treatment of the infectious processes is relatively disappointing, mainly because we do not enjoy the incomparable advantage which presents itself to surgery, of dealing with the infection in advance of its action, by employing aseptic measures to prevent the contact of it with the blood and tissues. In a number of instances—unhappily too few—successful resistance can be offered to intruding micro-organisms and to their toxic products. An antibody or an antiproduet may be introduced into the blood, or developed in it, in time to establish immunity.

In the causation of acute disease there are three factors to be reckoned with. First, there is the cause which we call essential, the specific infection, an extrinsic influence, the element without which in the particular instance, and in every other instance, the disease would not have occurred. Secondly, there is the patient's resistance to the specific infection, an intrinsic element. Thirdly, there may be incidental or concomital circumstances or associations which are not essential, because not present in every instance of the disease, but which, by occurring incidentally in particular instances, either favor the essential influence directly in its invasion of the body, or, on the other hand, lower resistance, and thus indirectly contribute to the production of the disease.

INCIDENTAL CIRCUMSTANCES IN CAUSATION.

It is of this third element of etiology that I desire to speak to-day, with respect more particularly to its nature and forms, and with respect to the opportunities that it affords the practitioner, not only to forecast, prevent, treat or otherwise control disease, but to take part in the advance of medical science.

These concomitant circumstances are of great variety, both in kind and in the manner of their incidence on the body. The

*Extracts from the address on Medicine delivered before the British Medical Association.

outstanding feature of the medicine of the present time is the study and practical application of the doctrine of general etiology from the two sides—from the second as well as from the first side, that is, with respect not only to the nature and incidence of the specific causes of disease, but also to the nature of immunity and the circumstances under which it fails. Whilst the pathologist in our public institutions, in hospitals, and in private laboratories, investigates the biology of germs, and the immunizing value of the blood by means of the opsonic index, and otherwise, the practitioner estimates, as he has done from time immemorial, with more or less intelligence and success, the value of what he calls his patient's constitution.

Not all of us, indeed but few of us, can work at the higher pathogeny. In respect of infections, we can but admire the skill and perseverance of our bacteriologists, assimilate as much as possible of their conclusions, and seek their help in the diagnosis and treatment of this class of diseases. Bacteriological investigation is too delicate and too difficult, and depends too much for its usefulness, and even for its safety, in practical medicine on correctness of conclusions based on skilled observation, to be conducted by the practitioner himself unless in a few cases. But we can all take a share in the cultivation of knowledge of the other branch of etiology. After all, the pathological laboratory is not the natural field of operation and observation of the action of the infections, excepting in those instances, happily not common, where the worker himself falls a victim to the disease that he is investigating. A knowledge of the patient's constitution, based on his record, is the peculiar privilege and possession of the family practitioner who takes full advantage of his opportunity. Living in the society of his patients, born and bred, as he may have been, in their midst, he knows, or ought to know, the conditions of inheritance and life, good and bad, under which their constitutional resistance to acute disease has been and is being shaped. If he has made proper use of this opportunity, the family practitioner is in as good a position as the most skilled pathologist to give an opinion on the prospect of successful resistance—that is, of recovery—in a case of typhoid fever or of pulmonary tuberculosis.

There is no better test of a good practitioner than the possession and exercise of a faculty of observing and judging with correctness the effects of incidental circumstances on the patient. The experienced doctor, as contrasted with the beginner fresh from hospital, knows that every passing event affects a case for good or for bad, and he never fails to give it its proper value in

estimating the condition and prospects of his patient. He knows that by keeping critical watch and firm control on the patient's surroundings he may be able to modify favorably the progress of a case that appears altogether unpromising when regarded solely from the side of its essential nature. He has learned that it is with a patient, not with a disease, that he is concerned; with a process, not with a lesion. An attack of paroxysmal dyspnoea in the course of chronic Bright's disease he does not interpret as directly due to increase of the renal lesions in degree or extent, but to careless indulgence on the part of the patient in meat or wine. He is prepared to find that return of pyrexia during convalescence from typhoid fever has been caused by a visit from friends, and is not a true relapse from reinfection. And it is because of his experience of the actions of extrinsic incidental influences in modifying the course of disease that the practitioner cautions the subjects of chronic quiescent appendicitis against exposure to cold and wet and fatigue.

The different influences that will surround our patient, and will tell on him for good or for evil, are forecasted, and, let me add, forestalled if possible, for in the proper appreciation of the prognostic conclusion lies the opportunity as well as occasion for preventive treatment. And this, let me repeat, is what the best type of family doctor understands and practices, passing his days amongst his patients, whose careers he helps to shape and to guide, and to control by advice, by encouragement, by warning, by reproof if necessary, as well as by means of dieting and drugs.

MALIGNANT DISEASE*

BY GILBERT BARLING, M.B., F.R.C.S.,
Professor of Surgery in the University of Birmingham.

The great era founded on the genius of Pasteur and Lister has extended its splendid influence over our knowledge and treatment of malignant disease. The revelation of bacterial and allied infections as the cause of so many diseases inspired the hope—indeed, I may say the expectation—that the origin of cancer would soon be laid bare. The veil is still unrent, the secret is yet hidden, and the world waits with painful interest for the revelations of the future. Our position to-day is in marked contrast to that which obtained a comparatively few years ago; then the predominant view was that cancer was a systemic disease of which the tumor was the local manifestation, and removal of the evident growth was rarely regarded as anything more than palliative. This conception of the nature of cancer provided a disastrous example of the influence of bad theory on practice. It led in most cases to totally inadequate removal of the disease, the speedy return of which *in loco* was held to substantiate the belief that it was due to a blood dyscrasia. By clinical observation, by patient pathological investigation, and, more recently, by laborious observation and experiment on some of the lower animals, we have obtained, and are still obtaining, knowledge which is pregnant with power and which is far in advance of that in the hands of our immediate predecessors. We can only fully appreciate this when we review our position from the three sides—experimental, pathological, and clinical. In the time at my disposal I must be content to address myself to three main considerations. Briefly, these are:

1. What experiment has taught us as to the growth of transplanted carcinoma, and the methods by which immunity can be conferred on inoculated animals.
2. Our knowledge of resistance to malignant disease in the human subject.
3. The means available for its successful treatment.

RESULTS OF EXPERIMENTAL INVESTIGATIONS.

If portions of a carcinoma from one mouse are grafted into several other mice of a similar strain, a certain number of these grafts, but not all, develop and form malignant growths indis-

*Address delivered at the Annual meeting of the British Medical Association.

tinguishable from the primary tumor, and will eventually determine the death of the inoculated animals. If the growth of these new tumors be investigated from day to day several points can be clearly shown. First, that the tiny nodule introduced grows by multiplication of its own epithelium and not by conversion of the cells of the host into carcinoma cells. Whilst the epithelial cells introduced are the source from which all others are formed, the part played by the tissues of the receiving host is of the utmost importance. The inoculated fragment consists of epithelium supported by a varying stroma of connective tissue, the two being blended in different proportions and on different patterns, producing carcinomas of varying type, as we find in human beings. The fate of the epithelial cell I have already mentioned. What happens to the connective tissue of the stroma? It degenerates, dies, is removed by phagocytosis, and is replaced by proliferation from the connective tissue cells of the host, which new tissue speedily becomes vascularized, and so provides the intruded epithelium with nutrition. If this new production of stroma from the host does not occur, the epithelial cells die, and the inoculation of cancer fails. Thus we learn that experimental carcinoma is a parasite, the essential element the epithelium, living its own life, and using its host as a provider of nutrition through the new stroma and its accompanying blood vessels. But we learn also that not content with exciting a production of new stroma and blood vessels to supply its needs, the epithelial cell so impresses the tissues in which it is implanted that a stroma is produced exactly similar to the stroma in the primary growth, be it of great amount or little, be it of one pattern or another. If the stroma of the primary tumor be highly vascular, so that the growth is of the hemorrhagic type, this will be exactly reproduced by successful inoculation.

If the experiment of transplanting carcinoma from one mouse to another be repeated sufficiently often another phenomenon may arise—a no less remarkable occurrence than the production of a new form of malignant growth, namely, sarcoma, which develops side by side with and is closely blended with the introduced carcinoma.

HUMAN RESISTANCE TO MALIGNANT DISEASE.

I would now turn to the second part of my theme, from experimental to pathological and clinical knowledge, both of which afford evidence of the struggle in the human subject between the tissues of the host and the parasite cancer. It is perhaps not clearly recognized that such a struggle exists; the tendency is

rather to look upon cancer as a constantly progressive disease, neither halting nor wavering in its course.

Of the absolute nature of the resistance to malignant disease at present we know little if anything. We cannot recognize the factor which heightens or lowers it, whether it be a chemical variation in the tissues or an influence produced through the nervous system, stress or anxiety perhaps exaggerating or exaltation diminishing the activity of the growth.

I think, however, we can recognize one striking feature in the destruction of the cancerous epithelium which is common to the experimental production of immunity, to the disappearance of growths under radium, to spontaneous recessive processes in the human body. This is the active part played by the connective tissues; we have an irritative overgrowth, with hyperplasia and subsequent contraction, which appears to determine the death of the epithelial cell.

TREATMENT OF MALIGNANT DISEASE.

When considering the means available for the cure or the amelioration of malignant growths, certain modes of treatment by cancer serums, by drugs, and by enzymes may be disregarded as futile. The X-rays have a real field of usefulness in relieving pain, in reducing the activity of inoperable growths, in healing rodent ulcers, if we are justified in including these amongst malignant formations. When, however, we examine the absolute curative value of this method of treatment, disappointment awaits us; personally, I have never known an unequivocal malignant growth absolutely disappear under the influence of X-rays, though apparently others have occasionally been more fortunate.

Turning to another side of radio-therapy, as provided by radium, it is necessary to speak haltingly, to avoid too enthusiastic hopefulness on the one hand, on the other too niggardly an acknowledgment of what radium as yet appears to have effected. We may clear the ground somewhat by immediately accepting radium as curative in rodent ulcer, with this reservation, that the permanence of cure must be certified by longer period of time than has yet elapsed in most of the cases treated. If we scrutinize the results of treating growths which are undoubtedly malignant, as shown by progressive local invasion and by secondary formations in lymphatic glands or other parts, we find much that is promising, but little that is conclusive. The difficulties in the way of treating malignant formations by radium are only truly appreciated when we recall the life-history and the methods by which malignant tumors invade local

and distant parts. How can we with present methods hope to pursue these successfully with radium? If a patient is the subject of an inoperable tumor, we are grateful for the benefit radium may give in the relief of pain, in the cessation of discharge, in the cicatrization of an open sore, and we should rejoice if cure seems probable. But when called upon to treat patients with operable malignant growths, are we justified in advancing radium as a substitute for excision? Personally, I would not at present take this responsibility. My main objection to the use of radium, even tentatively, in such cases, is the constant danger of lymphatic and vascular dissemination which may occur in the period occupied by the treatment. My conclusion would for the present limit radium to the treatment of the least hopeful conditions until much wider experience has been obtained. It would also be of advantage, for the present, if treatment by radium were left in the hands of the few rather than the many.

A brief time must be given to consideration of the treatment advocated by Dr. W. B. Coley, especially for sarcoma. His method was based on observation of the occasional cure of ulcerated malignant tumors by an attack of erysipelas. From this Coley has evolved his treatment by the toxins of the streptococcus of erysipelas intensified by an addition of toxins derived from the *micrococcus prodigiosus*. Many of us have administered Coley's fluid during the last few years, but the use of the mixed toxins in this country has not given such results as those attained by the originator of the treatment. With such experience as I have made, I could not advise any patient with an operable sarcoma to adopt Coley's treatment, and I would dissuade him from it as a substitute for operation; but if operation were refused, or the growth were inoperable, I would certainly advise the use of the toxins, with the expectation that some patients would be greatly benefited, though at present I am unable to discriminate and say which will benefit and which will not.

With every desire to use all means available which may relieve patients of the distress, anxiety, and possible mutilation which operation inflicts, with the belief that time will provide happier and gentler means than we now possess, I am compelled to say that at the moment we have to rely upon operative measures as the great remedy for malignant disease.—*Abstract Brit. Med. Jour.*

SOME POINTS IN THE TREATMENT OF ENTERIC FEVER

BY A. KNYVETT GORDON, M.B. CANTAB.,

Formerly Medical Superintendent of Monsall Hospital and Lecturer on Infectious Diseases in the University of Manchester.

It has often occurred to me that if one takes the subject of enteric fever as it is treated in most of the modern text-books of medicine, one finds it handled as if no very great change in our knowledge of the pathology of that disease or in our methods of dealing with it at the bedside had taken place in the last few years; in some works, in fact, the article might have been written twenty years ago.

As a matter of fact, however, such change has occurred, and certain discoveries in the field of clinical pathology have been reflected in the practice of those physicians who have had to deal with the disease in bulk, so to speak, with the result not only of considerably reducing the hospital mortality of the disease, but of—even more markedly—alleviating the sufferings of those afflicted with it. I purpose, therefore, mentioning some points which have struck me as essential in the treatment of Enterica, mainly from the point of view of the hospital resident, though, as will be seen, there is no great difficulty in adapting most of them to the exigencies of private practice.

CHANGED VIEWS.

Let us first see how our conception of the pathology of the disease has changed. Formerly we regarded the patient as one who was suffering essentially from ulceration of a more or less considerable portion of his intestine, which resulted primarily in diarrhoea, and sometimes was responsible also for intestinal distension, and often for perforation of the bowel, with its necessarily fatal termination. Certain toxins were formed at the site of the ulcers which, when absorbed into the circulation, gave rise to the general symptoms of pyrexia and prostration, and as a necessary consequence of their action on the cardiac muscle the patient suffered a prolonged and debilitating convalescence, which often rendered him incapable of completely performing his ordinary work for many months. Clinically, this view of the disease meant necessarily that the patient was fed on an entirely fluid diet consisting often of milk alone, not only during the pyrexial period, but usually for a fortnight or more after the

temperature had fallen; every slight rise of temperature after solid or soft food had been commenced was regarded as an indication that the physician had been too venturesome and that a return to the fluid dietary was indicated.

Nowadays, however, we do not regard the ulceration quite as the prime factor in the disease; we know that in the first week of the illness the bacillus typhosus is found in the circulating blood in almost every case where a careful technique is employed, and that as the illness progresses the organisms leave the blood and are discharged, *via* the bile, into the duodenum, so that actually more bacilli are present in the commencement of the small intestine than at the site of the ulcers themselves; indeed, it is not unlikely that the ulceration is quite a secondary process and is due to irritation of the intestinal lymphatic patches by the bacilli which have entered from above. We know also that in fatal cases the degree of toxæmia observed at the bedside is not proportional to the extent of ulceration found post-mortem.

THE MODERN IDEA.

This work of the pathologist was, however, preceded by a change in the method of treating enteric fever which has been practised for many years now in hospitals, though it does not appear to have found its way into private practice any more than into the text-books. It consists essentially in recognizing that diarrhœa is not, in the average case, a necessary symptom of enteric fever, but that it can readily be produced by the administration of milk (or perhaps any other food) after the patient has shown his inability to digest it. In practice the diarrhœa almost always ceases when the milk is stopped, and the milk curds, which are an essential feature of the "typical typhoid stool," disappear from the fæces. Moreover, the converse to this also holds good, namely, that the "typhoid stool" is often seen in other diseases (notably in cases of septic scarlet fever) when milk is inadvertently given to excess. The result of this change in the dietary of the enteric patients was not only a great reduction in the immediate mortality (which persisted irrespective of the varying severity of different epidemics), but also in an even more marked diminution in the incidence of those complications—namely, perforation of the intestine and relapse of the disease, which had been previously held to be due to premature resumption of solid food.

The modern practice in this respect may be summed up in the maxim to feed the patient irrespective of his temperature

chart on such food as he can digest, the idea being to enable him to combat the toxæmia, which is the essential feature of the complaint, by providing him with as much nutriment as we safely can.

HOW IT WORKS.

How does this work out in practice? In the great majority of cases admitted to the fever hospital the patient has diarrhœa and is passing milk-curds in the stools, so as a rule he is given nothing but water for twenty-four or even forty-eight hours; if he is very weak, a little egg albumen and possibly glucose is added to the water. When the diarrhœa has ceased, as it usually does, albumen-water, glucose, and perhaps baked custard and jelly, are administered.

Meantime attention is paid to the toilette of the mouth, for in a large number of cases the dry tongue is a sign of oral sepsis rather than of enteric fever; carious teeth are extracted under local anæsthesia.

In the majority of cases—again irrespective of the temperature chart—the patient is now hungry and has no distension of the abdomen and his tongue is moist. So the diet is gradually extended by the inclusion of bread and milk, bread and butter, pounded fish beaten up, or poached eggs, and ultimately pounded chicken, the essential point being to vary the menu from day to day and to give the patient such a quantity of food as to leave him slightly hungry after each meal. Tea and coffee are given freely and are generally much appreciated by the patient. Shortly, the indications for the use of solid—though carefully pounded—food are hunger, a moist tongue, and absence of diarrhœa and abdominal distension; but there remain, of course, some cases—generally those whom the physician does not see, or perhaps does not correctly diagnose, at a sufficiently early period of the illness—where diarrhœa is profuse and intractable and is accompanied by meteorism.

Here one must give fluid food only, and albumen-water is usually our sheet-anchor, though some preparation of concentrated milk proteid may often be safely and advantageously added; milk itself almost always aggravates the trouble, and beef-tea or meat extracts are quite inadmissible. Drugs, however, are sometimes useful, and I have found enemata containing turpentine very helpful sometimes, and also medical Izal oil given internally in the form of an emulsion in mucilage of tragacanth in doses of three minims of the pure oil (to two ounces of the emulsion) every two hours by the mouth. Personally I do

not like opium in these cases, it almost always increases the distension, and thus tends to favor the occurrence of perforation of the intestine, while it completely masks the signs of this catastrophe when it arises. A long, soft tube carefully introduced into the rectum, and allowed to remain there for an hour, is often useful.

SOME POINTS IN TREATMENT.

The use of IZAL oil perhaps demands a word of explanation; it is not given with any idea of disinfecting the ulcers; in the light of modern pathology it probably would not serve any very useful purpose if we could do this, and we fairly obviously cannot, for any antiseptic if soluble would be absorbed before it could reach the ulcerated surface, and if insoluble is in practice passed unchanged per rectum; but the IZAL emulsion is probably absorbed in or near the duodenum, and may perhaps check the formation of toxins which irritate the intestine lower down. Whatever theory, however, be held as to its *modus operandi*, I have no doubt from a fairly extensive trial that it checks diarrhœa.

It is also a powerful diuretic and diaphoretic, and this brings me to the next point—namely, whether we can assist in the elimination of toxins through the skin and kidneys. The first suggestion for this purpose was the routine use of the cool bath, and there can be no doubt that when the external temperature is high, as in Australia and America, whence come the most markedly favorable reports of its use, it may be employed almost as a routine measure. But otherwise, that is to say during the greater part of the year in this country, I believe that cold bathing is best reserved for the sthenic type of case. In robust adults, with full pulses and much delirium (of the violent, as distinguished from the low muttering type), it often acts like a charm; but I have seen some untoward results from its use in feeble patients and in those suffering from diarrhœa. As an antipyretic, cold bathing or sponging is sometimes efficacious, but it is seldom necessary or advisable to treat the pyrexia *per se*—one should prescribe for the patient and not for his temperature chart. It would seem that the enthusiasm for routine cold bathing has rather abated of late years.

A much more efficient measure, in my experience, lies in the administration of large quantities of water, or flavored barley water, by mouth, and a skilful nurse will often get her patient to drink from five to six pints of fluid in the twenty-four hours, this form of treatment being most efficacious when combined

with diuretics such as "imperial drink" or the aforesaid Izal emulsion.

In the treatment of the ordinary case we have, then, three indications to fulfil—namely, to keep up the patient's strength by the administration of adequate nourishment in order that his leucocytes may be in a condition to afford an efficient defence against the attacks of the bacillus or its toxins, to keep the intestine as still as possible by the avoidance of anything tending to cause diarrhoea, and to assist as far as we are able in the elimination of toxins through the skin and kidneys.

COMPLICATIONS.

A few words may now be said about the treatment of certain complications of the disease, and we will take first the occurrence of heart failure. This may be either sudden or gradual, and in the former case is almost invariably accompanied by extreme dilatation of the left ventricle, which can be detected by light percussion; it is particularly liable to occur in the course of attacks which are characterized by nervous prostration rather than by much pyrexia, the type of disease, in fact, which we often meet with either in thin, worried-looking men or in overworked women. In many cases the administration of stimulants by the mouth is useless, as they are not absorbed sufficiently quickly, and hypodermic injections are but little, if at all, more efficacious, as the capillary circulation is in a state of stasis. Very many patients, in fact, die immediately, but I have seen not a few saved by the timely application by the nurse of a towel or bath sponge wrung out of very hot water to the præcordia, and it is as well that instructions to this effect should be left with the attendants. Inasmuch as the condition is invariably accompanied by extreme pallor of the face, its occurrence can be detected by a careful nurse, or even by the patient's relatives. When the emergency has been treated a relapse must be guarded against by the hypodermic administration of strychnine at regular intervals.

FAILING HEART AND HAEMORRHAGE.

The treatment of the gradually failing heart is more difficult, as in many cases it is undoubtedly due to a specific action of the typhoid toxin on the cardiac muscle, and in consequence stimulants are not of much avail, and I am convinced that the administration of digitalis—apart from pre-existing valvular disease—is not only erroneous but dangerous, and there is, moreover, considerable risk of the dose of the drug being increased under the

belief that it is not acting sufficiently while the patient is in reality suffering from digitalis poisoning.

It is necessary here to mention the use of alcohol in enteric fever. My own view is that, in large doses, given for rapidly occurring heart-failure, and discontinued as soon as the emergency is past, brandy is very useful indeed, but that the common practice of administering two or three ounces of spirit daily for two or three weeks is most harmful. I have never satisfied myself that such doses were of any value to the circulation, and I am sure that they often produce or aggravate diarrhœa. Probably, strychnine is the most valuable drug we possess as far as the heart is concerned, and, if given hypodermically, does not seem to increase intestinal peristalsis.

The treatment of hæmorrhage from the intestine not only resolves itself into the administration of opium very freely, but it is also necessary to avoid the use of any hæmostatic which has the effect of raising the general blood-pressure. What then happens is that the action on the vaso-motor system outweighs the local effect on the injured vessel, and in practice such drugs as adrenalin, ergot, gallic acid, and the like almost always increase the hæmorrhage.

Just as it is necessary to use opium in hæmorrhage, so it is essential to avoid it in anything that may possibly turn out to be perforation of the intestine. The key to the successful treatment of the latter complication is that the surgeon shall have the opportunity of opening the abdomen in the pre-peritonitic stage, and this is impossible if opium be given. Moderately severe abdominal pain in enteric fever is far more often due to perforation than is usually supposed, and the result of the advice given in most of the text-books to give opium for abdominal pain is accountable for the descriptions in the same volumes of the symptoms of perforation, which are in reality those of the subsequent purulent peritoneal effusion. If the patient has an attack of colic, it can usually be relieved by the application of a hot fomentation, and, indeed, often by a cup of hot tea. In practice patients do not always, or, as I believe, usually suffer from severe collapse when perforation occurs. It is not necessary to consider seriously the view that any other procedure except prompt laparotomy can be of any avail in the treatment of this distressing occurrence.—*The Hospital*.

SPASMODIC PSEUDO-TUMORS OF THE LARGE INTESTINE

BY PROFESSOR MAURICE LOEPER, M.D.,
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Spasm plays an important part in intestinal pathology, and is met with in almost all affections involving the intestinal canal. It is seen not only in connection with inflammatory and neoplastic affections, for it not infrequently accompanies nervous diseases as well as infections and intoxications localized in this tract. It may be primary or secondary, but whatever its etiology it always presents approximately the same features, *viz.*, pain, constipation and intestinal obstruction, or even occlusion. In some instances it is located in the small, in others in the large, intestine, and the differences between these two distributions are manifested in the physical signs rather than in the functional disturbances.

As a matter of fact, owing to the extreme mobility of the loops of small intestine and the comparative thinness of their walls, their contractions are scarcely perceptible to the hand, whereas the fixity of the large intestine and its superficial situation enable us to make out easily enough the existence of spasmodic contractions in the iliac fossæ and the hypochondria. This spasm of the large intestine is tolerably frequent, and is met with especially in the neighborhood of the cæcum, the sigmoid flexure, and the transverse colon.

When present, the constricted segment of intestine feels like a thick cord or sausage, its mobility varying according to its site. It occurs in the iliac fossæ or the epigastrium, or, should there be enteroptosis, below the umbilicus. In a case reported by von Leube, the spasm extended from one end of the large intestine to the other, from the cæcum to the end of the sigmoid flexure.

The intestinal spasm may be limited to a particular segment of intestine, in which event one feels an indurated ring or lumps the size of a walnut or a tangerine orange, which appear and disappear, it may be, very rapidly. The spasm may, however, become fixed at a particular spot and remain stationary for a time. When this is the case, we feel for several days or weeks an elongated tumor or lumps liable to be mistaken for new growths, and as, not infrequently, the functional disturbances are well marked and the general health is, at the same time, undermined, the error is all the more probable. This is the state to which the term "spasmodic pseudo-cancer" has been given, several instances of which have come under my notice.

A man, *æt.* 47, came to us complaining of permanent pain in the left iliac fossa. The pain came on several times a day, in paroxysms, and it was associated with obstinate constipation, short of absolute fæcal stasis. This condition had lasted several weeks, and had given rise to a certain degree of anæmia and loss of flesh. On examining the abdomen, we discovered some enteroptosis, gurgling in the cæcum, and, over the sigmoid flexure, a tumor the size of a child's fist, which was very tender to the touch and did not take the impress of the fingers. The tumor underwent no change for twelve days in spite of the administration of castor oil. One day sand was found in the stools, followed by hæmorrhage that lasted 48 hours. The loss of flesh and cachexia became more marked, the patient's complexion assumed a yellowish hue, and suspicion was entertained of the existence of a growth. Now, however, the consistency of the tumor began to change from time to time; sometimes it was hard, sometimes soft, then all at once there was a copious evacuation of glairy matter, mucus and intestinal sand. The symptoms improved under treatment in spite of the continued passing of sand. Ultimately the tumor disappeared, so that it was in all probability a case of spasmodic contraction of the descending colon associated with intestinal lithiasis and mucous colitis.

Cases of this kind, for the matter of that, are by no means rare. They are well known to surgeons, and quite recently Mr. Pierre Duval related to me three cases in which the patients were sent into a surgical ward with the diagnosis of probable cancer of the colon, but under medical treatment recovery was rapid and complete.

The following case is one of spasmodic tumor of the cæcum. Some years ago a nervous medical student who had been working very hard came to consult me. He complained of abdominal pain, with loss of appetite, and alternative diarrhœa and constipation. With rest and strict diet he greatly improved, but four months later he returned, and on examining him I found in the region of the cæcum an elongated tumor, somewhat hard, which, in view of the patient's emaciation, was thought to be tuberculosis of the cæcum, especially as there was an evening rise of temperature and night sweats. This tumor persisted for a fortnight, and disappeared under treatment by tepid enemata, belladonna and valerian.

Dr. Chifoliau has supplied me with notes of a similar case under the care of Dr. Poirier. A man, *æt.* 65, had been complaining for a month of pain in the right iliac fossa, where there was a tumor. He was much constipated. Cancer was thought of, and an operation was almost decided upon, when the tumor suddenly subsided and health was restored.

Spasmodic tumors of the transverse colon are less common, but I remember a case of an emaciated patient who was suffering from abdominal pain, with vomiting and tympanites. This patient presented an elongated tumor in the direction of the transverse colon running from the left hypochondrium to the middle line, very tender to the touch, very hard, and somewhat irregular in outline. Its consistency, however, varied from day to day, and laxative treatment with tepid enemata and the administration of belladonna was followed by complete recovery in the course of several months.

Dr. Esmonet relates the case of a young woman, *æt.* 35, a highly nervous subject, who frequently suffered from abdominal pain. There was marked induration of the transverse colon, which persisted for three weeks, but subsided under the influence of rest, hydrotherapy and strict diet.

These cases illustrate very well the symptomatology and clinical course of spasmodic tumors of the colon, *viz.*, constipation, attacks of pain, loss of flesh and the presence of a tumor. In some instances we get bleeding from the intestine, due, no doubt, to ulceration, varicose veins or simple congestion. Then, too, there is distension of the loops of intestine above the contracted region, symptoms of pseudo-obstruction followed by the occasional elimination of intestinal sand, false membranes and mucus.

There is a good deal of nervous disturbance as a rule in these patients, who complain of palpitation and epigastric pulsation, pseudo-angina, polyuria and dysuria. Arterial tension is usually below normal.

The diagnosis of phantom tumors of the large intestine is by no means invariably an easy matter, and it may be difficult to discard the possibility of inflammatory induration and cancer. This is easy to understand in presence of loss of appetite, loss of flesh and cachexia, so frequent in these patients. Then, too, there may be a rise of temperature consequent upon the absorption of irritating intestinal products. The symptoms of obstruction, the violent attacks of diarrhoea, the cramps, the consistency of the tumor, its extreme tenderness and the bleeding, are all liable to lead us astray. But spasmodic tumors have a more even surface than new growths, they are more distinctly circumscribed, and almost invariably their size, like their consistency, changes from one day to the next. They are never adherent, and are not associated with any glandular enlargement. They may be multiple, disappearing from one part of the intestine only to make their appearance elsewhere.

Should, however, spasmodic tumor of the intestine happen

to accompany a new growth of the stomach or a latent neoplasm of the intestine, it is almost impossible to avoid an error of diagnosis.

As in most cases of spasmodic tumors there is more or less pronounced constipation, the question arises whether their super-vention is not a direct consequence of the retention of fecal matter at a given part of the intestinal tract rather than spasm, pure and simple. The reply to this question seems easy enough, since the spasm is often met with in patients who are not much troubled with constipation, it may persist after violent diarrhœa, and is met with even when the evacuations are normal. It follows that this intestinal spasm must not be confounded with tumors due to fecal retention.

The causes of intestinal spasm may be grouped in three classes: Among the causes of intestinal origin apart from tumors and specific diseases of the intestine in which spasm is consequent upon reflex irritation there are mild forms of irritation, a tiny ulcer, a simple erosion, the presence of gall-stones or intestinal calculi, membranes or worms. I remember the case of a child in whom I found an intestinal tumor the size of a tangerine orange, which subsided after the expulsion of three round worms.

As a rule, however, the irritation is more extensive, and chronic enteritis and intestinal enteroptosis are among the commonest causes mentioned in this connection.

When the spasm is not dependent on an intestinal cause, we must look for mischief in connection with the peritoneum or abdominal viscera to explain its presence. Mention has been made of exaggeration of the normal intestinal curves dragging on the phrenocolic ligament, intestinal adhesions or adhesions of the omentum and intestinal parietes, etc. In nervous women the presence of a cyst, of salpingitis, a fibroid or uterine irritation may set up spasm with constipation caused thereby, or of reflex origin. In man hernia mesenteric adenopathy, cysts of the spermatic cord and diseases of the testicle may determine these manifestations.

These spasms are said to be frequent in certain atheromatous subjects, and the influence of lesions of the mesenteric arteries on the production of spasm has been pointed out by Thorowgood and Pal. Personally, however, I am inclined to think that when spasm and hypertension are present at the same time they must be regarded as consequences of the same nervous irritation.

As a matter of fact, spasmodic contraction of the large intestine is often of nervous origin. In tabetic subjects, in those suffering from myelitis, or compression of the cord, it is of common occurrence. Some authorities look upon it as the outcome of

a neuritis of the mesenteric plexus and others as a symptom of nervous instability. One thing is certain, *viz.*, that many of these subjects of spasm of the large intestine are neuropaths or hysterical persons in whom the spasm may attack either the large or the small intestine, and alternates with other peripheral or vascular manifestations.

The four principal indications for the treatment of spasm of the large intestine are: oily enemata, oily laxatives, belladonna and hydrotherapy.

Oil exerts a well-marked effect in spasmodic contractures, whether in the œsophagus, the pylorus or the intestine. The oil must be given pure, or emulsified in warm water for enemata. At the same time we may give by the mouth one or two table-spoonsful of castor oil. Belladonna is the remedy *par excellence* in presence of spasm, a twelfth of a grain of the extract five or six times in the twenty-four hours. It may be associated with the administration of valerian.

As for hydrotherapy in presence of actual spasm it will be limited to the application of hot moist compresses to the abdomen and prolonged tepid baths. Cold intensifies the state of spasm.

The physical and physiotherapeutic treatment must be associated with a moral treatment. This state of spasm often follows emotional outbreaks, and in any case is intensified thereby. The patient must, therefore, be assured of ultimate recovery, if only to give him confidence in the treatment, and in some cases it will be necessary to isolate him. If the spasm be very pronounced, with a tendency to cause obstruction or even occlusion of the intestine, it will be advisable to have recourse to electrical enemata, the action of which is immediate. Very rarely indeed is the spasm so prolonged as to necessitate surgical intervention, but of course it is always possible for there to be some anatomical abnormality, constriction by a band of the phrenocolic ligament, exaggerated hepatic or splenic curves, adhesions, etc., that may render an operation necessary.

Then, too, the treatment should be in a measure preventive, bearing in mind the relationship that exists between spasm and enterocolitis, intestinal lithiasis and simple constipation. These affections indicate the desirability of instituting a suitable diet, the use of particular mineral waters, and the administration of nervine sedatives: valerian and the bromides, accompanied by hydrotherapeutical measures. Moist compresses should also be applied every day for an hour or so to the abdomen, or wet packs and tepid douches. The last named exert a remarkable effect on all spasmodic conditions.—*The Medical Press.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON,
BREFNEY O'REILLY AND F. C. HARRISON.

Skin Rashes in Typhoid Fever

Excluding altogether the common rose rash of typhoid fever, there are other skin eruptions occasionally met with during the course of that disease. Dr. J. Phillips collects in the *American Journal of the Medical Sciences* all those observed in 1,230 cases of enteric treated at the Lakeside Hospital. Herpes was present twelve times; eight times as labial herpes during the first week (which was at one time held to exclude typhoid from the diagnosis), and four times later in the disease upon the body. Urticaria was noted twenty-one times; no quinine was given to any of the cases. Sudamina are not very uncommon, and Dr. Phillips supports the opinion of De Lacaze that a crop of these vesicles in the third or fourth week is a good prognostic indication. Erythema developed in seven patients. Desquamation took place in eighty-three patients, following either rose rash, sudamina, or erythema; or as a trophic change analogous to the falling-out of the hair. Measly and scarlatiniform rashes have been recorded occasionally, but there were none in this series. Purpura was noted in six cases, and a pemphigoid eruption in four. Erysipelas complicated the later stages of the fever twice; both patients recovered. There were forty-five cases of furunculosis, two of carbuncle, five of onychia, nine of subcutaneous abscess, one of impetigo, and one of infected sebaceous cyst. Striæ patellares were found in a boy of fourteen, who became very emaciated in a prolonged attack, and also in a middle-aged woman.—*The Hospital*.

Prophylaxis of Acute Anterior Poliomyelitis

Regarding the prophylaxis of such a disease as anterior poliomyelitis, Römer and Joseph in the *Münchener Med. Woch.* state that two forms of preventive treatment—the hygienic and the medicinal—must be taken into account. In hygienic prophylaxis the possibility of domestic animals, such as dogs and chick-

ens, acting as carriers must be remembered, as well as the part played by human beings in distributing the disease. The mode of transmission probably has many points in common with that of meningitis. According to some authorities, the specific organism, or poison, is to be found in the naso-pharyngeal secretions of both those suffering from the disease and of the apparently healthy, infection being caused by contact with these secretions. As the result of experiment, it has been shown that the virus remains active after drying for a month, so that dust may play a part in the dissemination of the disease. The authors have proved by experiment that exposure to the vapor of formaldehyde for seven and a half hours, as in the ordinary method of disinfecting a room, renders the virus inert when injected into a monkey. Therefore the room of a patient who has recovered from an attack should be disinfected in this way. The same precautions with regard to the nose and mouth of the patient and all coming in contact with him are to be observed as are the rule when dealing with other infectious diseases, such as diphtheria, etc. With regard to the medicinal part of the prophylactic treatment, much hope is placed in the use of the serum of an immunized animal. Since one attack renders an animal immune to a second, and the serum of an immunized animal has been shown to prevent the development of an attack in an inoculated one, there would seem to be grounds for believing that this hope will be realized.—*The Hospital*.

Glycyl Tryptophan Test for Carcinoma of the Stomach
NEUBAUER and FISCHER. *Deut. Arch. f. klin. Med.* LYLE
and KOBER. *New York Med. Journ.*

These writers speak well of this test; it depends on the fact that an enzyme occurs in stomachs affected with carcinoma which is not present under ordinary conditions, and that this enzyme can break up the peptide glycyl tryptophan so as to free tryptophan while normal gastric contents cannot do this. An ordinary test breakfast is given and 10 c.c. of the filtered contents is incubated for 24 hours with a little glycyl tryptophan and enough toluol to form a layer on the surface. Then to about 3 cc. drawn off by means of a pipette and placed in a test tube is added some drops of 3 per cent. acetic acid. Then bromine vapor is allowed to fall in till there is a slight layer over the fluid. The tube is next shaken. A pink color shows the presence of free tryptophan. If no pink color appears more vapor is

added with further shaking. And this process is repeated till the pink color of a positive reaction appears or till the fluid becomes brown with bromine; in the latter case the test is negative. The bromine is added cautiously, for an excess may bleach a slight pink color which would otherwise have been present. If the gastric contents are acid they are neutralized as soon as they are drawn off from the stomach, as the carcinoma ferment is killed by an acid medium. Glycyl tryptophan may be obtained set up in capsules with toluol for this test from the firm of Kalle & Co., Biebrich a. Rhein.

Various fallacies have been suggested. (1) The presence of tryptophan in the stomach contents, derived from food. Normal gastric juice can certainly not break up proteins beyond the peptone stage, but there is some evidence to show that in carcinoma a further stage of digestion can take place. (2) The presence of peptide splitting bacteria. These would act probably to some extent, but the toluol present completely inhibits their action. (3) Reflux of pancreatic juices such as has been shown to occur where much fat is present in food. This fluid will vitiate the result for trypsin can split up proteids to amino acids such as tryptophan. It is not an easy matter to test for its presence; the most simple and satisfactory way is to judge it visually by the presence or absence of bile pigment. If there is doubt as to whether the bile color is present, the bromine test may be carried out, but in case it is positive further test meals should be given till one is obtained where no bile is present. (4) Presence of blood. Some ferment in blood breaks up the glycyl tryptophan, and as this ferment is present in the serum as well as in the corpuscles filtration is of no avail. Before incubating, therefore, it is necessary to try one of the color tests for blood. Lyle and Kober consider that no error arises here if blood is more dilute than 1 in 1000.

Neubauer and Fischer got in normal cases 4 negative results, in gastric ulcer cases 10 negative, in other non-malignant gastric cases 12 negative, in definite carcinoma of stomach 1 negative and 5 positive, in clinically certain carcinoma cases 1 negative and 12 positive, and in suspicious malignant cases 4 negative and 6 positive results.

Of Lyle and Kober's eleven cases where the diagnosis was proved, five in which there was carcinoma of the stomach gave positive results, and five varying reactions (two positive and one negative), and five in which there was no carcinoma of the stomach gave negative results.

It is worthy of note that if occult stomach hæmorrhages are as of common occurrence in carcinoma as is stated, they would occur too frequently to allow this test to be of any great value.—*Medical Chronicle*.

The Adductor Reflex. KELLER. *Deutsche Zeitschr. f. Nervenheilk.*

The adductor reflex, which may be evoked by striking the internal condyle of the femur or the head of the tibia with a percussion hammer, is quite analogous to the other tendon reflexes. The extent of the area by percussion of which the reflex can be evoked is of more clinical significance than the strength of the muscular contraction that constitutes the reflex; when the tendon-jerks are diminished it can be obtained at the most from the upper third of the tibia, but when these are exaggerated, either from organic causes or in functional states, percussion of any part of the inner surface of the leg or even of the inner border of the foot may produce it. The increase of the reflexogenous zone is proportional to the exaggeration of the other tendon jerks of the limb. But the adductor reflex cannot be employed as an indication of disease of the pyramidal tracts, as Babinski's sign, as it may be as much increased in functional as in organic condition.—*Medical Chronicle*.

Cardiac Syphilis. SEARS. *Boston Medical and Surgical Journal*.

In this paper Dr. Sears lays stress upon cardiac syphilis as being very much more common than is generally supposed, and upon its fatality. Syphilis attacks the heart and vessels in a variety of ways; in rare cases it may set up acute endocarditis, which may or may not involve the valves. As a general rule the heart is affected secondarily to the aorta and statistics lend support to the view that mesaortitis productiva is almost always of luetic origin. It has long been realized that aneurysm of the aorta is, in the great majority of cases, a result of syphilis. Syphilis is one of the most frequent causes of pure aortic insufficiency, but the coexistence of other valvular lesions is strongly against syphilis as an etiological factor.

Gummata of the myocardium are rare, it being far more common to find diffuse fibrosis.

Clinically such myocardial infiltration is manifested in a variety of ways. There may be general signs of heart weakness,

or definite angina pectoris. If the infiltration is localized, there may be signs of cardiac aneurysm.

The early symptoms of cardiac syphilis are somewhat vague; Runeberg states that the most significant are the following: paroxysmal attacks of cardiac asthma or anginal pain; unequal or irregular heart contractions, muffled sounds, an indistinct pulse wave, occasional cardiac murmurs over the aortic area in some cases, and persistent and increasing heart failure with dilatation and hypertrophy. The heart failure resulting from syphilis is characterized by its intractability to treatment, and the way in which relapses occur after causes entirely inadequate when compared to rheumatic heart failure.

Patients with cardiac syphilis are liable to sudden death, or to rapid death with symptoms of mitral insufficiency.

Owing to the importance of treatment being instituted at an early stage, it is well to regard young patients who give no history of rheumatism or of the allied diseases as suffering from a cardiac manifestation of syphilis. The author advises the administration of mercury by injection.—*Medical Chronicle*.

Babinski's Sign in Diphtheria

Dr. J. D. Rolleston, in an article reprinted from the *Review of Neurology and Psychiatry*, discusses the question of the presence of Babinski's sign in diphtheria. His paper deals with a series of 877 cases of the disease in which the plantar reflex was investigated in the course of the last four years. In 172, or 19.6 per cent. of cases, an extensor response of the great toe, with extension or flexion of the other toes, was found to be present for varying periods. In 29 flexion alternated with extension, and in 676 the normal flexor response was obtained. In no case was there absence of any response. In no case again was strychnine administered, as the occurrence of the sign after large doses of this drug has been noted. From the author's analysis of his cases he comes to the following conclusions: (1) Babinski's sign is found in a considerable percentage of all cases of diphtheria, the character of the response being rapid, deliberate, or intermediate in character; (2) the extensor response in this disease is not confined to infants, but may be obtained, though with decreasing frequency and duration, especially after the eighth year, until adult life; (3) it is essentially a phenomenon of the acute stage, in most cases being replaced by flexion in convalescence. Transition stages often exist in which various forms of response

may be obtained; (4) the sign is not pathognomonic of diphtheria, since it occurs in other acute infections such as scarlet fever, typhoid, lobar pneumonia, etc., but it has a certain diagnostic value, since it is met with more frequently in diphtheria than in non-diphtheritic angina; (5) it is more frequent and persistent in severe than in mild attacks of the disease, and its presence has therefore a certain prognostic value; (6) it is not associated with any special condition of the tendon jerks, and is never accompanied by ankle-clonus; and (7) it is probably due to a transitory perturbation of the pyramidal system by the circulating toxins, comparable to the slight degree of meningeal reaction which is a frequent occurrence in acute infections.—*The Hospital*.

Hyperthyroidism

Hyperthyroidism, says Pitfield, *New York Medical Journal*, may be so mild as to cause a few pains and aches, or so severe as to render the victim a bedridden, neurasthenic invalid; ugly, perhaps, and miserable; and often a complete puzzle for the medical attendant. Not always is the patient myxedematous. He or she may be so far advanced in the disease that the atrophic form obtains with emaciation and cachexia, so extreme that no subcuticle tissue, save bones and muscles, remain. Or the disease may be so slight that almost no skin changes are apparent, as in the cases reported by Pitfield. In fact, the patient may be rather fair to look on and yet have so many nervous symptoms as to be miserably ill, and in the eyes of many doctors a nervous, rheumatic crank.

Pitfield has seen in all nine cases in private practice. One patient was so myxedematous that she and her family preferred that she should not appear in public places, because she attracted the attention of nearly everybody by her hippopotamus gait. Two other patients were merely fat looking with puffy faces and swollen eyelids; one was a cachectic, prematurely old and withered-looking woman invalided for years, in whom there was but little suggestion of myxedema; two were comely, handsome women, one 35 and the other 53 years of age; another a thin, nervous little woman, a familiar type, with many ills and no myxedema. All had several things in common. All had had children. All had joint pains that were called rheumatism. The fat ones were all thought to have nephritis, the thin ones nervous prostration. And all without exception had had a galaxy of doctors who had misdiagnosed their ills.

Any woman approaching middle life or in the fourth decade,

who has had a history of backache, an occipital headache, together with joint pains, dyspnea, asthenia, should be suspected of having hyperthyroidism, especially so if she has amenorrhœa or had had it during the menstrual life. The treatment consists in the administration of thyroid extract.—*J. A. M. A.*

Encapsulated Pleural Effusions

Fraenkel, *Therapie der Gegenwart*, remarks that diaphragmatic pleurisy causes insignificant symptoms when the encapsulated effusion is of slight extent—merely a big blister—but the pain may be considerable, with much tenderness at certain points, especially at the intersection of a line continuing horizontally the tenth rib with a vertical line continuing the outer margin of the sternum. The epigastrium may also be tender and the tenth and eleventh interspaces, and there may be a particularly sensitive point close to the spine. Pressure on the phrenic nerve in the neck is also liable to be painful. Besides these radiated pains there is sometimes pain in the stomach and pain as what is swallowed passes the diaphragm and, likewise, pain in the region of the diaphragm during coughing. Hiccough and vomiting are also liable to occur from reflex action as the food passes the diaphragm. A reflex contraction of the abdominal wall at the close of a deep inspiration may also be observed. When the mediastinal pleura was involved there was a sudden stormy onset of symptoms in the 6 known cases of this kind; high fever, the disturbances restricted to one side, and the affection leading to a small accumulation of pus, which generally perforated into the bronchi. The symptoms are those natural from compression of the vagus and recurrent nerves, air passages or esophagus. An encapsulated interlobar effusion may be of small amount or up to a pint or quart of effusion or pus; it generally is most evident along the axillary line from the fourth to the sixth interspace, where it is most readily reached by the needle. When it increases in amount, threatening symptoms on the part of the lungs and heart are possible. Puncture may not locate the effusion, and the compression of the air passages and heart may suggest a tumor, but radiography will confirm the assumption of an interlobar effusion based mainly on the pallor, persisting fever and resonance over the right upper lobe. Putrid empyema is generally secondary to a gangrenous process in the lung, he says, but he has met with a case in which a traction diverticulum of the esophagus was the primary trouble. He adds that these traction diverticula are common, but are easily overlooked at autopsies.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON
AND HELEN MACMURCHY.

The Nature of Erosion of the Cervix

Editor British Medical Journal:

SIR,—In your brief preliminary report of the discussion which followed Professor Gottschalk's lantern demonstration of the microscopical appearances of erosions of the cervix, at the annual meeting of the British Medical Association, the following remarkable sentence appears: "It was pointed out to Professor Gottschalk that the term 'erosion' does not to the British gynecologist imply any adenomatous growth as it seems to do in Germany." If your reporter had used the word "English" instead of "British" I should not feel called on to correct him, but even then it appears that he would be wrong.

I take Drs. Bland-Sutton and Giles' "Gynecology" as representative of English opinion; I take Drs. Hart and Barbour's "Gynecology" as representative of Scotland; and for want of a better, I take my own as representative of Ireland. In the first-named I read of "Adenomatous disease (formerly called *erosion*) of the cervical endometrium." In the second-named I read, "The raw-looking surface" (of erosions) "is therefore a *newly-formed glandular secreting surface*, resembling in structure the cervical mucous membrane." In the last-named I read, "The altered tissue" (of an erosion) "closely resembles the structure of an adenoma, and consequently, the condition is sometimes described as an adenoma of the cervix."

I, for one, was certainly of opinion that no other view than that contained in these extracts was held by "British" gynecologists, and I should be very interested to learn who was Professor Gottschalk's instructor. It is a pity that we should appear to be more ignorant than we really are.

I am, etc.

HENRY JELLET.

Dublin, Aug. 10th.

Editor British Medical Journal:

SIR,—When the full report of the discussion on Professor Gottschalk's demonstration before the Gynecological Section, at the recent annual meeting of the British Medical Association is

published, Dr. Jellett, whose letter appears in your issue of August 20th, will see that the brief account in the *British Medical Journal* of August 6th is not only incorrect, but in fact diametrically opposed to what took place.

As the matter has been given such prominence, and as I was the so-called "instructor," perhaps you will kindly allow me to put the matter right in a few words.

Professor Gottschalk gave a very lucid demonstration of a series of photomicrographs of what he called "erosion" of the cervix, and of what he considered the transition stage, and the complete transformation of this condition into carcinoma.

I pointed out that the sections represented instances of *chronic cervicitis*, with one (I think) exception, which was a carcinoma; and that they certainly were not examples of what British gynecologists had in the past termed "erosion," which is a definite adenoma, and should be known by that name.

An intermittent discussion followed between Professor Gottschalk, Professor Nagel, and myself, during which diagrams were drawn, and the whole matter threshed out. There is, however, no need to trouble you with the details.

Subsequently Dr. Comyns Berkeley and the president stated that I had fairly represented the view of British gynecologists, namely, that the condition is adenomatous; and they pointed out that if the views of Professor Gottschalk and Professor Nagel represent those generally held in Germany, then the term "erosion" was applied in that country to a different condition from that known by the same name in the United Kingdom. Consequently, it was suggested that this term (erosion), which is certainly a bad one, ought to be dropped entirely. I did not think anyone present remained in doubt at the end of the discussion as to the relative views held by the speakers; but I believe your reporter's error was due to some delay on my part in forwarding the notes on which he had intended to rely for a correct interpretation of what was said.

I am, etc.,

W. BLAIR BELL.

Liverpool, Aug. 20th.

Forceps Operations

Forceps operations, especially, are undoubtedly undertaken with too great frequency. It is common to meet those who use instruments in 10, 20 or 30 per cent. of their deliveries, or even

in a larger proportion, so frequent are the indications for interference in their practice. How often these indications are their own creation they do not state. Nor do they confess how frequently they are influenced by a desire to curtail the dreary time of waiting at the bedside, or are inspired by a humane desire to cut short the sufferings of the patient.

To give an idea of the frequency with which forceps are used in various European hospitals, I quote the following list, compiled by Wahl: Von Walla, Budapest, 1882-1895, 1.04 per cent.; Kezmarszky, Budapest, 1874-1882, 1.4 per cent.; Abegg, Danzig, 1872-1885, 2.2 per cent.; Leopold, Dresedn, 1879-1885, 2.56 per cent.; Gusserow, Berlin, 1882-1886, 2.66 per cent.; Ahlfeld, Marburg, 1881-1888, 3.5 per cent.; Von Rosthorn, Prague, 1891-1894, 3.63 per cent.; Braum, Wien, 4.3 per cent.; Fehling, Basel, 1887-1893, 5.33 per cent.; Von Saxinger, Tübingen, 6.5 per cent.; Schauta, Innsbruck, 1881-1887, 9.16 per cent.; Schultze, Jena, 11.6; Von Winckel, München, 1884-1890, 22.6 per cent.

These figures, taken from teaching institutions, represent a higher percentage of indications than actually existed, for in many instances the instruments were used, where they were not necessary, in order to give instruction to students. Taking this into consideration, it is indeed striking that the percentages are so low. As more difficult cases occur in maternity practice than in private, it is very evident that the necessity for instrumental delivery in private practice must be very small.

The risks attendant upon the use of instruments are well recognized by those who are experts in applying them, and who cannot avoid them in a considerable percentage of cases, even by the exercise of marked skill and judgment. Too frequently among those who are not experts and do not work with scientific knowledge, is found a disregard of these dangers. One occasionally hears experienced practitioners boast of the hundreds of women they have delivered without mortality. They do not think of the stretching and tearing which they do not see, and make light of those which are visible, unless of the most severe nature. As long as a patient does not die from hemorrhage or sepsis, the labor is considered satisfactory. Responsibility for a long list of mechanical and infective troubles which follow the disregarded lesions is not shared by them.

As a gynecologist, I cannot too strongly emphasize, among the etiological factors concerned in the production of women's diseases, those which arise from injudicious and meddling interference with the normal parturient process.—J. CLARENCE WEBSTER, *Buffalo Med. Jour.*

Pregnancy and Diabetes

H. Neumann (*Berl. klin. Woch.*) discusses the relationship between diabetes and pregnancy, and comes to the conclusion that the rareness of the coincidence of the two conditions can readily be explained. Diabetes is a comparatively rare and a very severe disease in young persons. It is much more common in men than in women. Women of a marriageable and child-bearing age are therefore not frequently affected by it, and of those who are so affected, the majority are too ill to think about getting married. Further, he points out that only a small proportion of those who would get married under these circumstances would be likely to conceive, on account of the reduced condition of their bodies. He points out that some cases arise during pregnancy, or after marriage, in response to nervous affections. On subjecting these and other cases to a critical analysis, he finds that the diabetes occurs as an accidental accompaniment to the pregnancy, and although the cases may end fatally at childbirth, this is by no means necessary. In conclusion, he finds that although diabetes and pregnancy rarely accompany one another, it is necessary to forbid girls who are suffering from diabetes to marry, on account of the very bad prognosis of this disease when it affects women of a childbearing age. When a married woman is found to have diabetes mellitus it is necessary to instruct her to avoid conception. Pregnant diabetic women or pregnant women who are excreting glucose should be kept under strict medical control and placed on an antidiabetic diet. Operative interference of pregnancy in a diabetic woman should not be undertaken, unless some other indication calls for such a procedure.

Disadvantages of Conservative Caesarean Section

Couvellaire (*Ann. de gynéc. et d'obstét.*, November, 1909) condemns the routine practice of conservative Caesarean section. In a critical analysis of reported results in the clinics of the advocates of this operation, he shows that repeated Caesarean sections on the same patients have not been followed by so favorable results as many have maintained, whilst sterilization has been practised in many instances by the same operators, who were thus compelled ultimately to defeat the object of the conservative operation. He concludes that there is always one danger after convalescence, and that lies in the uterine wound. Its cicatrix remains as a permanent line of fibrous tissue, which

can never become muscle fibre, so that the perfect musculature of the uterus, absolutely essential for natural labor, is spoilt. The cicatrix is always liable to yield during a future pregnancy or labor. Couvelaire reminds obstetricians who talk about the "good surgery" principle said to be manifest in those who save the uterus in all cases that the surgeon who sutures the intestine, stomach or bladder has not to take into account this special danger attending suture of the uterus. Conservative section cannot be indefinitely repeated, cases performed for the third or fourth time with satisfactory results are exceptions, for, as a rule, later operations are liable to bad post-operative complications, hence the frequent necessity for sterilization. Indeed, Couvelaire concludes his summary, after declaring that it should only be attempted in very carefully selected cases, by saying that sooner or later Cæsarean section must have as an inevitable corollary—sterilization. He adds some instructive drawings showing the Cæsarean cicatrix in uteri ultimately removed by Porro's operation.—*Brit. Med. Jour.*

The Eclampsia of Labor

Rudaux (*La Clinique*, April, 1910) advanced the view that eclampsia met with during labor is of a special type, that it differs from the eclampsia of pregnancy in its pathology and in its clinical manifestations, and that it is not a disease but a symptom produced by absolutely different causes. He reports the case of a young primipara with strong neuropathic tendencies. During her pregnancy frequent examination showed the urine to be free from albumen, and the daily amount passed did not fall below one and a half pints. Labor occurred at term, and was perfectly normal, lasting about twelve hours, the patient being kept more or less under chloroform during one hour. Twenty minutes after delivery, without any warning, she had a convulsive seizure of the clonic type, which lasted for two minutes. She gradually recovered consciousness, but half an hour later a second attack occurred, leaving her in a somnolent condition. Eight similar attacks occurred during the day, the patient becoming profoundly comatose. Catheterization of the bladder produced a very small quantity of urine, which was dark in color and contained albumen. The treatment included absolute quiet, irrigation of the intestine, chloroform during the crises, an injection of 3 grams of chloral (repeated thrice in

twenty-four hours), and only water to drink. As the blood pressure was not much increased venesection was not attempted, but the loss from the womb was more than usually abundant. The next day the crises had ceased, and her condition had improved, although the blood pressure was still above normal, and there was general drowsiness. A pint of urine drawn off with the catheter showed a very small trace of albumen, which disappeared on the third day, when micturition became normal. On the sixth day she had an attack of pyleonephritis of the right kidney, which cleared up under urotropine, her subsequent recovery being satisfactory. In this case there were no prodromal symptoms; the attack came on suddenly, the bladder being practically empty and the albuminuria disappearing in a few days. Eclampsia of this type must be regarded as one of the accidents of labor which can neither be foreseen nor prevented.

Editorials.

THE DEAF CHILD

Mr. Macleod Yearsley, F.R.C.S., Senior Surgeon to the Royal Ear Hospital, and Medical Inspector of the London County Council Deaf Schools, is the author of the opening article in the *British Journal of Children's Diseases* for August. The article is, in substance, a lecture which was originally delivered at the London Polyclinic, and is on the subject of "The Duty of the General Practitioner to the Deaf Child." Mr. Yearsley, who, it is well known, is one of the few men who has attained in the early prime of life to an enviable and authoritative position among the specialists of the metropolis, has given himself with enthusiasm to that great new field of preventive medicine (one might almost say patriotic medicine) opened by the action of the educational authorities in establishing medical inspection of schools. At the recent International Congress of School Hygiene at Paris Mr. Macleod Yearsley was one of the foremost helpers, and also distinguished himself in the battle royal waged between those who did or did not want, as the case might be, to exclude specialists from the schools. where his knowledge, his experience, freshly-gained in the schools where he had done such admirable work, and his ready wit, made him an almost invulnerable opponent. In the lecture in question the author points out that deaf persons, and especially deaf-mutes, have often been neglected by the general practitioner. He observes that, were he asked what is the greatest advance which has marked otology during the past ten or fifteen years, he would unhesitatingly reply that it is the fact that the greatest cause of ear disease lies in the nose and naso-pharynx. He goes on to prove that nasal obstruction is equivalent to eustachian obstruction, and that the real orifice of the eustachian tube lies at the outer nostril. He refers later on to the connection between gastric derangement and adenoids, and describes a case of his own, the patient being a little seven-year-old girl who suffered from dys-

pepsia, morning nausea and vomiting, which disappeared entirely after the removal of a large mass of adenoids. After dealing with the details of the operation for adenoids, and also referring at some length to the exanthemata, meningitis, congenital syphilis and mumps, from the aurist's point of view, Mr. Macleod Yearsley concludes a very valuable article by a brief but pointed reference to the duty of discouraging consanguineous marriages, inasmuch as something like 50 per cent. of the cases of congenital deaf-mutism are either (1) amongst those who have cases, either direct or collateral, in their families, or (2) amongst those who are blood relations, and, further, to the duty of parents to provide proper teaching by the oral method for deaf children, and teaching the child at home "as a *speaker* and not a *signer*."

HOSPITAL FOR THE FEEBLE-MINDED IN ORILLIA

Mr. Joseph P. Downey, of Guelph, formerly a member of the Ontario Legislature, has been appointed Superintendent of the Hospital for Feeble-Minded in Orillia. Some objection has been raised to this appointment because the new Superintendent is not a physician. From this standpoint it happens fortunately that Mr. Downey as a layman has taken a remarkable and very intelligent interest in the medical aspects of public questions, as, for instance, the prevention of tuberculosis and a proper supervision over foods. This, however, does not happen to make him fit for a position where a medical expert is required.

On behalf of the Government, the Provincial Secretary tells us that he and his confreres had decided on a reorganization of the Orillia Hospital, their idea being to place a layman in charge of the administration of the business of the institution, and in addition to place a medical director and suitable assistant, these two physicians to devote themselves exclusively to the medical side of the work. He says that in adopting this plan they are following the methods in vogue in some of the best institutions in the world. Mr. Hannø referred particularly to two of the

principal and most modern institutions in England for the treatment and care of the feeble-minded, one located at Sandlebridge and the other at Starcross, each presided over by a layman with a medical officer and staff in charge of the medical treatment of the patients. In another portion of this issue it will be noticed that Dr. MacMurehy visited and studied carefully the methods in each of these institutions.

Without any extended comment at present we may say that the appointment of two capable medical men ought to be satisfactory to the public and profession of Ontario.

THE CRIPPEN CASE

From a medico-legal standpoint the celebrated Crippen case is furnishing interesting developments. After the disappearance of Crippen's wife several months elapsed before the Scotland Yard detectives could obtain sufficient evidence to found a charge of murder against Crippen. At a certain time portions of the remains of a human body were found beneath the cellar floor in his house. Various rumors have arisen as to the said remains. At the time of writing we are told that the lawyers for the defence are trying to show that it is not possible to distinguish sex in the remains. Prof. Pepper, of the London University, stated in his evidence that the remains were those of a middle-aged adult that had been buried four months. Crippen was born in Coldwater, Mich., and his wife, known in England as Belle Elmore, was born in Brooklyn, N.Y., her maiden name being Cora Belle Makomaski. Crippen, who has passed as a doctor in London for some years, appears in the medical directories of the United States to be a graduate of the Homeopathic College of Cleveland, Ohio, 1884. In 1886 his address was 8 Madison Ave., Detroit. In 1890 his address was 955 Fifth St., San Diego, Cal. In 1893 he is supposed to have had for his address 78 Maiden Lane, New York, and in 1896 he lived in Philadelphia. He left Philadelphia early in 1897 and went to London, Eng., where he became physician for a quack concern

known as the Drouet Institute for the Deaf. After some temporary success from a money standpoint, the institute failed. Crippen then conceived the idea of running a similar concern under another name, and he established what was called the Aural Remedies Company, with what he called his "special absorbent treatment." After a time this company got into trouble, and the whole concern was designated by a noted British Judge, Mr. Justice Matthew, as a disgraceful institution carried on for an unworthy object by discreditable means.

BABY SHOW AT TORONTO EXHIBITION

A baby show is generally supposed to be an exhibition of babies with prizes for the best-looking. It was quite a surprise to many spectators at the baby show conducted by the Programme Committee of the Labor men at the Toronto Exhibition that good looks was only a single element in the requirements of the little prize winners. The following matters were considered in each case by the judges: general appearance as to health and good looks, absence of physical defects, cleanliness, neatness of dress, proper proportion as to height, weight and figure.

The physicians who acted as judges showed an intelligent interest in their difficult work which was both admirable and surprising. The reports and comments in the lay press showed that the public took more than a passing interest in the events.

The simple fact that perfect health was the main consideration was evidently highly satisfactory to the majority. It seemed to create a new line of thought as to good looks or otherwise in babies. If health and strength are the main points, it seems desirable that mothers should make a special effort to assist nature while their babies are growing into girlhood and boyhood. While many were considered, the choice announced was ten or twelve best boy babies under one year of age, called the "top notchers."

The next question which might naturally arise was what sort of food was given to the older babies, and how was the food

administered. We believe that many of the mothers and their friends would be very glad to get information as to the best methods of feeding children in their second and third years.

It is probable that this "show" will be repeated at future Exhibitions, and that it will become a great educator in many respects. If so it will certainly be a great improvement on the "baby show" which in times past was conducted chiefly with the aim of furnishing amusement for the onlookers.

UNDESIRABLE IMMIGRANTS

We understand that numerous items have appeared in the press of Great Britain, and many have been cabled from there to the press of Canada, commenting unfavorably upon the present Canadian immigration regulations. The adverse criticism has been directed almost exclusively to two regulations.

The first of these requires immigrants coming to employments other than farm work or, in the case of females, to domestic service, to have in their possession at the time of landing the sum of \$25 in addition to railway transportation to their ultimate destination. From a medical standpoint we are not particularly interested in this regulation, but it seems reasonable that immigrants who come into the country should be required to have some money in addition to the bare price of a railway ticket from the steamer to their place of destination.

The second regulation requires that the consent to emigrate to Canada shall be given only to such as are suited for, willing to accept, and have assured employment at farm work. This provision is intended to regulate charity-aided immigrants from England to Canada largely. From a medical and physical standpoint we think this regulation is exceedingly important and should be strictly adhered to by the authorities at Ottawa. We think at the same time that it is a regulation that ought to apply to the good sense of all intelligent people in the British Isles. It is too late now to advise us to receive in Canada without

question the imbeciles or physically incompetent from any country, but, apart from any question of political economy, we think it is both foolish and cruel to send from one country to another people so weak physically and mentally that it is impossible for them to earn a living in their new environments. Surely it is better for such unfortunates to be kept at home.

THE TREATMENT OF FEEBLE-MINDED PEOPLE

Dr. Helen MacMurchy, of Toronto, returned Sept. 1st from a trip to Europe. While in England and on the Continent she was engaged in securing information for the Government of Ontario as to the best methods of treatment of the feeble-minded. She visited an institution at Sandlebridge, where the young men are under the charge of a farm superintendent, who teaches them methods of working on farms. In the same institution the young women are trained by an experienced housekeeper as to things pertaining to home life. She also visited Starcross, near Exeter, Eng., where the feeble-minded inmates are instructed in various trades.

While in Paris Dr. MacMurchy was elected a member of the Permanent Council of the International Congress on Hygiene, being proposed by Sir Lauder Brunton, of England. She was the first woman to be selected for this high honor.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

We understand that the twenty-third annual meeting of this very vigorous Association, which was held at Syracuse, N.Y., Sept. 20-22, was one of unusual interest. Among those who took an active part were the President, Dr. A. B. Miller, Syracuse, the Mayor of Syracuse and the Dean of the Medical Department of Syracuse University. Three interesting papers were read on uterine cancer. Dr. Walter B. Chase of Brooklyn

and Dr. Isadore Sanes both referred to the great importance of early diagnosis and early treatment. Dr. Chase thought that an appeal should be made to the public for the establishment of homes or hospitals in all communities for the surgical care and skilled nursing of poor women afflicted with uterine cancer.

Dr. Chas. E. Congdon, of Buffalo, in a paper on ectopic gestation, agreed with the majority in considering that it was practically always tubal; at the same time he considers that it has been clearly proved that there are certain exceptions. He considered that diagnosis before rupture is even more difficult than has been generally supposed, and that in many cases inflammatory or neoplastic conditions have been incorrectly supposed to be ectopic sacs.

Dr. Henry Schwarz, of St. Louis, read a very interesting paper on puerperal septicemia. After giving a historical review of child-bed fever he discussed the treatment, especially by serum therapy and bacteria vaccines. He considered that local puerperal infections generally recover under rational treatment; there was, therefore, no excuse for experimentation with serum or vaccines in such cases. Generally, pyemia and general sepsis have a high mortality. No known antistreptococci serum manifests a curative influence with any degree of regularity; however, its administration is harmless and it does good in certain cases. Further experimentation on animals is desirable. He expresses the opinion that streptococci vaccine can only do harm in these cases.

The blood already contains billions of streptococci, and millions of these die, whereby certain toxins are set free, causing the formation of all the specific antibodies the patient is able to furnish. The introduction of a few millions of killed streptococci under such circumstances can do no good, but may do great harm by lowering the resisting forces of the body.

The subject of Cæsarean section was considered by three surgeons. Dr. Henry Carstons, of Detroit, read a report of a Cæsarean section in a patient where the pregnant uterus was within an umbilical hernia. Dr. Wm. Humiston, of Cleveland, discussed the high operation in Cæsarean section, and Dr. Asa

B. Davis described the operation by the small median incision above the umbilicus. Dr. Herman Hayd, of Buffalo, wrote a paper on intususception in infants. He expresses the belief that this condition is much more common than is usually supposed, because of ignorance and carelessness in first examination. Diagnosis should not be difficult, as the symptoms and history are frank and dramatic in their onset, although frequently too much importance has been placed upon the presence of the sausage-shaped tumor. Early surgical treatment is urgently required. Dr. Jno. B. Murphy, of Chicago, read a paper on radical treatment of procidentia uteri and prolapsus recti. He referred to the many operations which have been advised for complete procidentia of the uterus, and considered that some had been materially successful; the uterus had been frequently sacrificed, with an occasional good result. He thought, however, that in this case the perineal muscles and crowded ligaments could not give sufficient support. He therefore performed a certain operation by which he fixed the uterus extraperitoneally with satisfactory results. The technique is simple, and relapses cannot occur. Dr. A. Van der Verr, of Albany, read a very interesting paper on the work which has been accomplished by the association. He gave the reasons for the organization of the association, and referred to certain actions of the Congress of American Physicians and Surgeons. Dr. Wm. H. Taylor, of Cincinnati, was the first president. He gave an outline of the general work that had been done and the discussions which had taken place in connection with abdominal surgery, pelvic surgery and obstetrics. He referred to the happy fact that discussions, as a rule, had been remarkably sharp, keen, and beneficial to those in attendance; at the same time the Fellows had always shown the highest professional respect for one another.

ONTARIO MEDICAL COUNCIL

The Registrar of the College of Physicians and Surgeons of Ontario, Dr. J. L. Bray, has sent out an official notification respecting the coming election of members of the territorial

divisions. Nominations will be received by the returning officer of each division up to 2 o'clock p.m. Nov. 14th. The ballots will be opened and counted by the returning officers Dec. 6th.

At the last election there were four contests in the 17 divisions then existing. The following were elected by acclamation: Division No. 1. Dr. J. L. Bray. When Dr. Bray was elected Registrar of the College Dr. C. W. Hoare, of Walkerville, was elected in his place, also by acclamation. 3, Dr. McArthur, London. 4, Dr. J. A. Robertson, Stratford. 6, Dr. Henry, Orangeville. 7, Dr. P. Stewart, then living in Hamilton. When Dr. Stewart ceased to be a member because he left the division and settled in Guelph, Dr. H. S. Griffin, of Hamilton, was elected in his place. 8, Dr. H. S. Glasgow, Welland. When Dr. Glasgow died Dr. Merritt, of St. Catharines, was elected in his place. 10, Dr. E. E. King, Toronto. 12, Dr. H. Bascom, Uxbridge. 13, Dr. S. C. Hilliar, Bowmanville. 14, Dr. M. E. McColl, Belleville. 15, Dr. W. Spankie, Wolfe Island. 16, Dr. J. Lane, Mallorytown. 17, Dr. W. O. Klotz, Ottawa.

In Division 2 there was a contest between Dr. John Mearns, Woodstock, and Dr. J. H. Cormack, of St. Thomas, Dr. Cormack being elected. Dr. Vardon, of Galt, defeated Dr. L. Brock, of Guelph, in Division 5. Dr. R. J. Gibson, of Sault Ste. Marie, defeated Dr. Aylesworth, of Collingwood, in Division 9. In Division 11 there were three candidates, Dr. A. A. Macdonald, a former member, Drs. J. S. Hart and B. L. Riordan, all of Toronto, Dr. Hart being elected. It is rumored that in the coming election there will be opposition to Dr. J. A. Robertson, of Stratford, Dr. J. Henry, of Orangeville, Dr. A. E. McCaul, of Belleville, Dr. Edmund E. King, of Toronto.

Notes

MEDICAL COUNCIL ELECTION

The nomination papers for members of the Medical Council of Ontario must be in the hands of the Returning Officer for each division by Monday, November 14th, at 2 p.m., and the voting papers by Monday, December 5th, 1910, at the same hour.

By order.

J. LANE, *President*.

J. L. BRAY, *Registrar*.

The following resolution *re* Dominion registration was adopted by the Alberta Medical Association at Banff, August 11th inst.: "Your Committee on Legislation beg leave to recommend that in the opinion of this Association it would be in the best interests of the medical profession, not only of this province, but of the whole Dominion, that Dominion registration be brought about as soon as possible by the adoption of the Canada Medical Amendment Act, 1910." Carried.

REUNION OF MEDICAL CLASS '92

The Class of '92 in Medicine, of the University of Toronto, held their second reunion in Toronto, Sept. 8th, 1910. On the evening of that day they had a banquet at the Toronto Club. Dr. H. A. Bruce presided, and the guests of honor were Dr. Adam Wright and Dr. Frederick Fenton. Among those of the class present were: Drs. R. J. Forrest, Port Hope; J. A. Hershey, Owen Sound; J. R. Smith, Grimsby; E. G. Smith, India; H. J. Way, Chicago; T. H. Middleboro, Owen Sound; J. A. Evans, Allandale; R. H. Green, Embro; William Crawford, Hamilton; George Bowles, D.A. Clark, J. N. E. Brown, Toronto.

It was decided to hold the next reunion with the class of Trinity of '92 in 1912, and the following officers were elected: Honorary President, Dr. Adam Wright; President, Dr. H. J. Way; Vice-President, Dr. F. Fenton. The Executive Committee will be composed of the members of the class living in Toronto.

TYPHOID FEVER IN TORONTO

More deaths have occurred from typhoid fever in Toronto up to the middle of September of this year than in any previous year since 1900. The following is the record of deaths for ten years:

1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
21	23	25	35	41	40	63	53	61	79	107 to Sept. 15

The increase in recent years is due almost entirely to the impurities of the water, due to pollution with sewage. The great increase this year is due in part to the epidemic which occurred early in the year, there being 62 deaths in the first three months, *viz.*, January, February and March, and there seems to be no prospects of any betterment until the sewage works are completed. At the time of writing we are told by the City Medical Health Officer that our water is good, but warned at the same time that in a short time, especially during the equinoctial storms, that the water will be bad. The Public Analyst may tell us that the water is pure to-day, but he cannot tell us what it will be to-morrow. The only safe thing, therefore, for the citizens of Toronto for the next two or three years will be to boil all the water which is used for drinking purposes.

Personals

Drs. J. M. McCallum and S. Cummings, of Toronto, sailed for Europe Sept. 17th.

Dr. F. A. Cleland, who confines his work to gynecology only, has removed to 57 Bloor Street East, Toronto.

Dr. Helen MacMurchy has been appointed inspector of girls and Dr. Wilmot Graham inspector of boys in the Public Schools of Toronto.

Dr. F. Arnold Clarkson returned to Toronto, Sept. 7th, after a trip to England and the Continent. He spent a good portion of his time at work in the hospitals at Vienna.

Dr. J. Harvey Todd, radiographer, Toronto General Hospital, and member of the American Roentgen Ray Society, has removed his laboratory for radiography and radiotherapy to 163 College Street, Toronto.

Dr. J. N. E. Brown of the General Hospital, Dr. Beatty of Grace Hospital, and Miss Brent of the Sick Children's Hospital, Toronto, attended the meeting of the American Hospital Association at St. Louis, Mo., Sept. 20-1-2.

The following have been elected by acclamation as the representatives of the Graduates in Medicine in the Senate of the University of Toronto: Wm. Burt, M.B., Paris; Herbert J. Hamilton, M.D., Toronto; Augusta Stowe-Gullen, M.D., Toronto, and C. J. Hastings, M.D., Toronto.

LOST. A post mortem case, made by Colin, Paris. This set was borrowed a few months ago and never returned. A suitable reward and certificate of honesty will be made on its return. If the party forgets to whom it belongs, communicate with THE CANADIAN PRACTITIONER AND REVIEW and no questions will be asked.

A large and lucrative practice in the city of Toronto for disposal. The doctor is called to the far east in a professional capacity that will necessitate his remaining many years, and before going can give a personal introduction for about three months. The house and office is situated in the choicest locality, and the opportunity is one seldom met with. "Box A," CANADIAN PRACTITIONER AND REVIEW.

Obituary

ISAAC WOOD, M.A., M.D. M.R.C.S. (Eng.), F.O.S. (Edin.)

On Monday, August 20, Dr. Isaac Wood, of Kingston, had a stroke of apoplexy which caused paralysis of the right side. On the same day he had been at active professional work, and had performed an operation for appendicitis at the General Hospital. He remained unconscious until his death, August 24th.

Dr. Wood was born in the County of Grenville in 1853, and was 57 years of age at the time of his death. In early manhood he became a public school teacher, and then the principal of a business college. He then took a course in Arts and Medicine in Queen's, and graduated M.A. in '91, and M.B. in '92, after which he went to England, where he spent some time in London. He returned to Canada in '93, and settled in Kingston, where he was engaged in practice up to the time of his seizure. He was Professor of Pediatrics, and Assistant Professor of Obstetrics and Gynecology in Queen's Medical College.

WILLIAM HOWELL DRAKE, M.D.

Dr. W. H. Drake, the oldest physician in Essex County, died at his home in Windsor, Sept. 6th. He graduated M.D. from Victoria University in 1857. He lived and practised medicine in London for about forty-one years, and moved to Windsor twelve years ago, where he lived in retirement. Dr. F. P. Drake, of London, and Mr. F. A. Drake, barrister, of this city, are sons.

JAMES EDGAR SAWDON, M.D.

We announce with deep regret the death of Dr. J. E. Sawdon, of Listowel. He attended Trinity Medical College, and graduated M.D. from Trinity University in 1902. After practising a couple of years in Blind River he went to England, and, after a term of study in London, passed the "Double Qualification" examination. He settled in Listowel in 1908, and his prospects

were very bright. While away for a short summer holiday he saw, in consultation, a patient with smallpox, and shortly after contracted the disease. Reports came to his friends in Toronto that the attack was a mild one. Soon after came a telegram announcing his death, August 30th.

JAMES MOYSTON McCARTHY

Dr. McCarter, of Verona, Ont., died of appendicitis Sept. 15th, aged 37. He was operated on and appendicectomy was performed three days before his death at the Kingston Hospital. He graduated from the University of Toronto in 1896, and was House Surgeon in the Hospital for Incurables in that city during the following year.

RUFUS O. SNIDER, M.D.

Dr. R. O. Snider, 42 Carlton St., was found dead in his bed on the morning of September 16th. The cause of death was said to be heart failure. He was only 46 years of age, but had been in poor health for several years. He graduated from Trinity University in 1896.

JAMES E. THOMPSON, M.D.

Dr. James E. Thompson, formerly of Toronto, and a graduate of Baltimore Medical College, died suddenly at his home in Throp, near Seranton, Pa., Sept. 18th, aged 28.

Book Reviews

The Diseases of the Nose, Mouth, Pharynx and Larynx. A text-book for students and practitioners of medicine. By Dr. ALFRED BRUCK (Berlin). Edited and translated by F. W. Forbes Ross, M.D. (Edin.), F.R.C.S. (England), late Civil Surgeon His Britannic Majesty's Guards Hospital, London; Assistant North London Hospital for Consumption and Diseases of the Chest; Clinical Assistant Metropolitan Hospital for Diseases of the Nose, Throat, etc.; assisted by Friedrich Gans, M.D. Illustrated by 217 figures and diagrams in the text, many of which are in colors. New York: Rebman Company, 1123 Broadway.

The usual text-book on diseases of the nose and throat seems to take it for granted that its readers are, or intend to be, specialists in that particular branch of medicine. The result is that the general practitioner has to hunt through pages of detailed matter which are as a rule of no interest except to the specialist. The present publication is one that will appeal particularly to the busy practitioner as well as the student. Methods of examination are particularly well described, so that one who has not been enabled to have special instruction can easily grasp what the author means. Some very fine illustrations and diagrams are used to exemplify this portion of the work.

In the descriptions of operations also the instruments are shown *in situ*, thus aiding one to appreciate the technique.

The translator is to be commended for the very clear English edition that has been produced; in fact the reading matter is much better arranged than many books of English or American origin. We know of no book on this subject that can be better recommended.

A Text-Book of Pharmacology and Therapeutics; or the Action of Drugs in Health and Disease. By ARTHUR R. CUSHNEY, M.A., M.D., F.R.S., Professor of Pharmacology in the University of London; Examiner in the Universities of London, Manchester, Oxford and Leeds; formerly Professor of Materia Medica and Therapeutics in the University of Michigan. Octavo, 744 pages, with 61 engravings. Cloth, \$3.75 net. Lea & Febiger, Publishers, Philadelphia and New York. 1910.

During the four years which have elapsed since the previous edition of this well-known work, pharmacology has made many advances, owing to the increased interest taken in this branch of scientific research all over the world. An enormous amount of new literature has appeared, and we are gradually becoming surer of the actions of an increasing number of drug stuffs. All this is in contradistinction to the earlier investigations of pharmacology, which left one in a hopelessly uncertain frame of mind, and tended to the abolition of drugs as essential factors in treatment.

This reaction tending towards confidence in the prescribing of a definite drug for a definite purpose is to be noticed in the present fifth edition, a great deal of which has been rewritten. The actions of digitalis, ergot and adrenalin, as learned from the new methods of investigating the human circulation, are fully given. The rôle of the organic compounds of arsenic in the treatment of trypanosomiasis, and a brief discussion of the antitoxins have also been included. Altogether, the book will be found to embody all that has been proved and accepted to date in the study of the action of drugs.

Heart Disease, Blood-Pressure and the Nauheim-Schott Treatment. By LOUIS FAUGERES BISHOP, A.M., M.D., Clinical Professor of Heart and Circulatory Diseases, Fordham University School of Medicine, New York; Physician to the Lincoln Hospital; late Chairman of the Section on Medicine of the New York Academy of Medicine; Member of the New York Pathological Society; Alumni Association, St. Luke's Hospital, etc. Third edition. New York: E. B. Treat & Company. 1909.

In the third edition of this book the author adds some further notes on the Schott treatment, writing from his personal observations at Nauheim. There are two parts to the book, in the first of which is taken up the question of heart disease and blood-pressure, and in the second, the Nauheim-Schott treatment. This latter is to be commended for the very thorough manner in which the treatment by baths and resisted movements is described. The various movements are shown in a series of excellent photographs, and one should have no difficulty in carrying out the treatment after reading this section. The closing chapter gives some clinical reports of cases as treated by the system, and cannot fail to leave one impressed with the undoubted value and efficiency of the Nauheim therapeutic procedures.

The Macs of '37. A Story of the Canadian Rebellion. By PRICE-BROWN, author of "In the Van," etc. Toronto: McLeod & Allen, Publishers.

It is the exception to find a Canadian physician who in his spare hours turns his efforts to the art of letters. It is a pleasure, therefore, to see, as we do from the book before us, that we have in our ranks men who, apart from their work, devote themselves, not to the stock market, but to building up a Canadian literature.

Canada is a young country, but, young as she is, she has a history, which we are too apt to forget. Dr. Price-Brown, in his story of the Rebellion of 1837, has introduced to us William Lyon Mackenzie, Dr. Rolph and others who were prominent in those stirring times. *Cherchez la femme* is no less true of the novel than of the latest scandal, and in this case the heroine is the daughter of a stern old Highlander, who lords it over a domain among the Thousand Islands of the St. Lawrence. As a literary effort the latter part of the book is better than the first, which shows a slight tendency to drag. When once launched into the midst of things, however, events move quickly enough. Anyone interested in the history of his own country should find the book very readable.

Selections

A Rapid and Delicate Method of Detecting Bile Pigment in Urine

The best known methods of detecting bile pigments in the urine depend upon the fact that oxidation leads to the production of pigments of different colors; the commonest is that with fuming nitric acid—Gmelin's test. It is well enough known, however, that even in cases of distinct jaundice it may be difficult to get a positive reaction for bile pigments in the urine, and if this is so in patients who are already known to be jaundiced it is still more likely to be so in those slighter cases in which incipient jaundice is suspected, but in which there is some doubt. Macadie has described a method of detecting them which is both rapid and more delicate than most other tests. It depends, like most others, on the extraction of bilirubin, and the production of a series of colors. It has the advantage that the amount of oxidation may be regulated and prevented from going so far as to pass through the green stage of biliverdin to the yellow or indeterminate stage of choletelin. About 10 c.c. of urine is acidulated with acetic acid, shaken up well, and to it is added enough of a clear saturated solution of calcium chloride to precipitate the bulk of the urates. The specimen is centrifugalized well, the supernatant liquid is decanted from the sediment, the latter is rinsed with a few drops of water, which is again decanted off and the precipitate left as well drained as possible. The greater part of the bile pigment that was present in the 10 cubic centimetres of urine has been carried down by the precipitated urates. To the latter 5 or 6 cubic centimetres of Macadie's reagent are now added; this consists of one part of hydrochloric acid of specific gravity 1.16 and three parts of rectified spirit of wine. On stirring with a glass rod the urate precipitate dissolves to a more or less clear solution on to the surface of which five or six drops of nitric acid of specific gravity 1.12 are allowed to trickle down the side of the tube. The liquid rapidly assumes a series of colors precisely similar to that of Gmelin's test. At the bottom of the liquid and next to the nitric acid is a yellow layer, above that a wine-red layer, above that a blue layer, above that a bluish-green layer, and above that a green layer. Care should be taken not to shake up the liquid. When bile pigment is present in any quantity the appearance is almost like that of a spectrum. The layers of different colors

are not in such close proximity as they are in Gmelin's test, and Macadie states they are therefore much more easily recognized. In doubtful cases, especially when the urine is being tested in a laboratory, the traces of bile pigment from a pint of urine can be collected in quite a small urate precipitate, and this makes the test a very delicate one. With the aid of a centrifugal machine the procedure can be carried out in less than five minutes, and it is not influenced by urobilin, blood pigments, or indican.

The danger of misinterpreting the brown color produced when the nitric acid is employed is considerable in practice, and the importance of avoiding this source of error is great. The only difficulty that might arise in connection with Macadie's test would be if calcium chloride did not give a precipitate of urates. This must be a rare occurrence, but when it arises one drop of caustic soda solution may be added to the mixture of calcium chloride and urine so as to get a phosphatic instead of a uratic precipitate. The process may then be continued in precisely the same manner as above and the reaction obtained as before.—*The Hospital.*

Scarlet Red for Epithelial Growth

Fisher first observed some few years back that solutions of scarlet red subcutaneously injected into a rabbit's ear induced an active proliferation of the overlying epithelium. As a result of this observation scarlet red has been employed to assist in the skin formation over clean granulating surfaces, and has been found of great value for this purpose, hastening the healing of large cutaneous defects and not infrequently supplanting skin grafting. Dr. Strauss publishes an article on the subject in the *Deutsche Medizinische Wochenschrift*. He employs an 8 per cent. ointment. Scarlet red is dissolved in chloroform oil, the solution being stirred until the chloroform has evaporated. Vaseline is then added to make the 8 per cent. ointment. This is spread upon gauze and is applied to the cleansed area. It should be changed every day or at least every other day. The addition of any antiseptic is unnecessary. This treatment is indicated in any large granulating area and is of special value for the epidermisation of defects following burns and for granulating wounds. In such cases, according to this author, subsequent contracting scars are in a large measure avoided. It has also acted very well in cases of ulcers of the leg, especially of the varicose variety and in weeping eczema.—*The Hospital.*

Bier's Passive Hyperaemia

It may be remembered that Bier's method of hyperaemic congestion has been used successfully in the treatment of writer's cramp, cases being recorded by Dr. Bucciante and by Dr. Hartenberg. Dr. Migliaccio has now published the report of a case of alcoholic tremors which he was able to completely relieve by the same method of treatment. The patient was a workman aged fifty, who had been addicted to alcoholic excess for a long while, and was suffering from severe gastric dyspepsia. One day in the course of his work he was taken with an acute pain at the level of the left radiocarpal joint (the patient was left-handed). Under appropriate treatment this pain disappeared in the course of a month, but left a tremor of the hand, which increased on voluntary movement. The whole condition—the tremor and the gastritis—was undoubtedly of alcoholic origin. Special diet and total abstention from alcohol were prescribed, and at the same time the tremors of the hand were treated by Bier's method. Already after six applications, each of which was of about 1½ hours' duration, there was marked improvement, which continued to increase after each successive séance, so that at the end of a month's treatment the patient was completely cured of these tremors. The rapidity of the improvement and the progress taking place *pari passu* with the applications proved beyond doubt, at any rate to the mind of the author, that the cure was actually due to the passive hyperaemia and not simply to the special diet and abstention from alcohol.—*The Hospital*.

The Metabolism of Myasthenia Gravis with a Suggestion Regarding Treatment. PEMBERTON. *Amer. Journ. Med. Sci.*

Though the clinical aspect of this disease has received a good deal of attention, little has been adduced regarding its etiology or pathology. Spriggs has examined the nitrogenous metabolism and creatinin output in various cases of muscular loss of function and believes creatinin to be a product of the internal metabolism of muscle, not of its contraction. In myasthenia gravis he finds the creatinin output diminished, suggesting a condition of disturbed muscle metabolism.

In the case here described, some investigations as to metabolism were carried out, the total nitrogen, ammonia, creatinin, calcium and magnesium of the urine being determined while the faeces were examined for total nitrogen, calcium and magnesium.

The patient was placed upon a diet whose content in the features investigated was known. Over a period of six days the patient showed a nitrogen retention of 16 grams. The creatinin output was diminished. The ammonia output seemed within the limits of health and the magnesium metabolism was normal. The calcium metabolism, however, did not maintain an equilibrium, showing a loss of more than 8 grams.

It is known that calcium has some close relation to the functions of muscular activity, for it has been shown by Loeb that a condition of muscular spasm can be produced by the injection of agents which precipitate the body calcium in an insoluble form, and that this condition can be relieved by injection of calcium salts.

Removal of the parathyroids in dogs which produces tetany is associated with loss of calcium in the urine and feces and the tetany can be controlled by administration of calcium.

The diminished creatinin output and excessive calcium excretion in the case here recorded suggest that myasthenia gravis may be a disease of deranged muscle metabolism and indicates the use of calcium as a possible therapeutic agent. In the case under investigation calcium lactate was given and the patient has markedly improved in the course of a year and a half, but as some observers have noted remissions for long periods, and as strychnine has also been given, it is difficult to know what part of the improvement observed should be ascribed to the calcium.

It seems at least that this definite evidence of disturbed calcium metabolism may furnish a clue to treatment.—*Medical Chronicle*.

Primary Carcinoma of the Vermiform Appendix. NORRIS. *Univ. Penna. Med. Bull.*

After describing a case of primary carcinoma of the appendix in a woman aged 26, Dr. Norris states that carcinoma of the appendix is by no means so rare as has been supposed, and he suggests that, if all inflamed appendices were carefully examined, carcinoma would be found present in from 0.5 to 1 per cent. of the cases.

Diagnosis is practically impossible before operation. In some cases the symptoms are those of chronic appendicitis and in others the condition is only discovered during the course of operations undertaken for other reasons. Dr. Norris urges that the frequency of the condition is a strong argument in favor of the routine removal of the appendix in all cases in which the abdomen is opened.—*Medical Chronicle*.

The Diagnosis of Aortic Insufficiency. BRELET (*Gaz. d. Hop.*, February 8, 1910.)

While the diagnosis of a typical case of aortic insufficiency is easy, atypical cases occur in which the recognition of the lesion is very difficult. Thus the murmur instead of being blowing may be rough; it may be low-pitched and vibrating or high-pitched and musical. Occasionally it may be entirely absent. In this case the diagnosis must be based upon the size and shape of the heart, the location of the apex-beat the Corrigan pulse, the capillary pulse, the double murmur in the crural space and other less constant manifestations of the lesion. Landolfi has recently described a new sign of aortic regurgitation which, while often absent, is almost pathognomonic if present. It consists of a rhythmic contraction and dilatation of the pupil independent of the will of the patient or of light. With each ventricular systole the pupil contracts, dilating with the diastole. The explanation of the phenomenon is simple enough, the contraction of the pupil being due to the momentary engorgement of the iris during systole and the dilatation to its abrupt emptying during diastole. It is, in a word, the manifestation of a capillary pulse in the iris.

A less striking, but more constant, sign is the so-called "choc en dôme" of Bard. This is best recognized by palpating the apex-beat by means of the ball of the thumb. In aortic insufficiency the apex of the heart can be felt to harden during systole in a circumscribed area of considerable extent, giving the feeling as though a ball or a dome-shaped mass were suddenly making its appearance under the palpating thumb. It is due to the ventricular hypertrophy and is most clearly felt when the patient lies on his left side.—*Interstate Medical Journal*.

The Permanent Slow Pulse

P. Rostaigne, of Paris, recently discussed the permanent slow pulse in an article published in the *Medical Press and Circular*, July 20. Adams, in 1827, was the first to describe the pathological permanent slow pulse, and the question has come to the front again recently. As a rule the pulse rate in these cases is from thirty to forty pulsations a minute, but it is sometimes even slower than this. In a general way examination of the heart does not reveal anything abnormal in respect of the orifices, but Stokes, who, together with Adams, described the pathological condition known as Stokes-Adams' disease, called atten-

tion to a peculiarity of the heart that is sometimes met with. Between the audible heart contractions a dull, muffled sound is heard, which he regarded as an abortive systole represented only by auricular contraction. It follows that the heart sometimes splits up the systole into two parts, a superior auricular, and an inferior ventricular, which occasionally misses fire. Rostaigne shows that Stokes' observations are borne out by the present conception of the pathogenesis of permanent slow pulse. Permanent slow pulse is an affection that runs a long course. As a rule it lasts for several years, but the prognosis is always grave, indeed fatal. Since Charcot's time and up to a recent date, the Stokes-Adams' syndrome has been regarded as a consequence of disturbance of the circulation in the medulla, that is to say, the central nervous system was credited with a preponderating rôle in regulating the heart beat. In view, however, of recent physiological and anatomical researches, the myogenic theory has taken the place of the neurogenic, the conception of cardiac automatism is now generally admitted, and little or no importance is attached to the medulla as the seat of origin of the disturbance of cardiac rhythm. The symptoms observed in the course of permanent slow pulse are now referred to a lesion of His's bundle, and what is more important is the fact that syphilitic lesions have been found at the root of the mischief. As Rostaigne remarks, this is quite a novel conception and justifies our anticipating recovery, in many of these cases of permanent slow pulse, as a result of mercurial treatment.—*Medical Record.*

Pulsus Paradoxus and Compression of the Subclavian

Riebold, *Berliner klinische Wochenschrift*, states that pulsus paradoxus has been clinically important since Kussmaul pronounced it pathognomonic of chronic mediastinopericarditis. Since that period the phenomenon has been observed in connection with a great variety of different conditions. A physiological type is explained by negative pressure within the thorax, due to the act of inspiration, which gives rise to a slight fall of blood pressure. This type is demonstrable only by the sphygmograph. The phenomenon is regarded as practically the same for the two sides, although a difference appears in forced breathing. In pathological pulsus paradoxus the falling in blood pressure which constitutes the phenomenon becomes apparent to the finger. The author wishes merely to record that in his opinion

certain cases (one of which he reports) have a purely mechanical cause, to wit: compression of the subclavian artery between the clavicle and first rib. It has long ago been shown that such compression may occur in deep breathing. A pulsus paradoxus due to such compression is revealed by elevating the shoulders of the patient, which separates the clavicle from the first rib. The author calls attention to the unwisdom of examining only the radial artery in pulsus paradoxus. The carotid should always be tested as well. When both vessels give an inspiratory intermittence, which disappears on raising the shoulders, the pulse is no longer paradoxal, but its cause is sufficiently explained. It then becomes a compression pulse.—*Medical Record*.

Chemistry of Urine in Pulmonary Tuberculosis

It is claimed by King, *Medical Record*, who has done some original work in this line, that the urine would show wasting and an imperfect interchange of gases due to diseased lung tissue. Wasting should be shown by the urea excretion, and imperfect interchange by the elimination of the purin bodies. He tabulates the results in 52 cases, 43 of which represented various stages in patients who were able to be out of bed, the others being bed cases. If the patient is near a fatal termination the urine will measure between 600 and 800 c.c.; it will have a decided red color from pigments of blood cells that are being destroyed; it will show a urea reaction that is more than 4.00, and the urinometer reading will be between 20 and 25. Specific gravity undergoes little change. Uric acid is not increased to any great degree. Tuberculosis produces a relative increase in the principal products of nitrogenous metabolism. If the volume of urine expressed in hundred c.c. be multiplied by the urinometer reading, we shall get a so-called V-G factor; if this be low it indicates that the patient is not taking sufficient nourishment to sustain the body in a state of health. The author introduces various new reactions that are explained in connection with the tables.—*J. A. M. A.*

Test of Kidney Functioning by Elimination of Disease in the Urine

Wohlgemuth, *Berliner klinische Wochenschrift*, applied this test first on dogs and then in 50 clinical cases, the reliability and accuracy of the findings sustaining, he declares. the value of

this simple method of testing kidney functioning; the test is complete in half an hour. He has two sets of 10 test-tubes, in which he pours from 0.06 to 0.6 c.c. of urine in turn and then to each tube he adds salt solution to bring the total contents of each to 1 c.c. He then adds to each tube 2 c.c. of a 1 to 1,000 solution of "soluble starch." The stands with the tubes are then set in the water bath at 38 or 40 C. for half an hour after which 1/50 normal iodine solution is added to each tube, a drop at a time, until the tint changes permanently. The findings are obtained by comparison of the action of the diastase according to the concentration in starch in the different tubes, each set containing the urine from only one kidney, segregated by catheterization of the ureters. The urine does not have to be filtered, and it can also have served previously for determination of the freezing-point; a little blood does not affect the test. In health, both human beings and dogs seem to eliminate approximately equal proportions of diastase with both kidneys. In a typical case reported, the freezing-point was 1.28 in the right urine and 0.53 with the left; sugar 1.6 per cent. with the right, and 0 with the left; indigocarmin test: green after 7 minutes and blue after 15 with the right urine, the left urine still colorless; the index from the diastase test after 30 minutes was 10 in the right kidney and 3.33 with the left; after 24 hours, 25 with the right and only 8.3 with the left. The findings with all these functional tests thus harmoniously agreed, while the diastase test is even more sensitive than the indigocarmin and phloridzin tests, as it often gave positive findings when the other tests were still negative.—
J. A. M. A.

A Possible Differential Sign Between Cardiac Dilatation and Pericarditis with Effusion

W. J. Calvert (*Journal of the American Medical Association*) says that extreme dilatation of the heart is often difficult or impossible to differentiate from large pericardial effusions, and he gives a possible differential sign. In patients with large hearts the sternum is depressed, the entire liver is depressed, the right lobe of the liver is relatively elevated as to interspaces, the right lung is elevated and pushed outward and backward, thus giving a high position of the liver with a narrow band of lung-liver relative dullness. In pericarditis with effusion the liver is depressed, the right lung is pushed outward and backward more than upward, thus giving a low position of the liver with a nar-

row band of lung-liver relative dullness. The size of the liver is of no material importance. Two factors compose the differential sign—the position of the liver and the presence and position of the diminished area of lung-liver relative dullness. Of these the position of the liver is most important.—*Medical Record*.

Pseudoapical Murmurs

Allard (*Berliner klinische Wochenschrift*) writes very briefly upon this very important subject, which is so deeply concerned with hasty diagnosis of incipient pulmonary tuberculosis. The author is a member of Prof. Minkowski's staff at the Breslau University Medical Clinic. Given that we obtain in a particular case auscultatory and percutory evidences of incipient phthisis, the question which arises concerns the negative interpretation of the phenomena. No doubt many murmurs heard in these examinations are extrapulmonary and due to contractions of the trapezius, scaleni, etc. Such auscultatory illusions should be corrected by percutory evidence. But all such sounds are not muscular in origin; for in some cases there is evidence that they proceed from a sort of creaking of the bones and joints. The late Dr. Rosenbach was active in this diagnostic field and laid down rules for distinguishing between pulmonary râles and muscular sounds. But the very pains he took with this subject illustrate its intrinsic difficulties. He, as well as others—including the author—sought to exclude muscular participation by a system of "holding" during which auscultation of the apices was being undertaken. No doubt in all routine examinations much can be effected by placing all the muscles concerned in a state of repose.—*Medical Record*.

Miscellaneous

Simplified Tuberculin Skin Test

Barabaschi. *Gazetta degli Ospedali e delle Cliniche, Milan*, rubs the region with alcohol until the skin is red. Then in the center of the small area thus prepared he spreads the thinnest possible layer of undiluted tuberculin without rubbing it in and lets it dry. In the cases in which he has applied the tuberculin test in this way, the reaction was always positive in the 34 known tuberculous and negative in 35 controls. A positive reaction was obtained in 3 cases in which only the tendency to anemia had suggested tuberculous, but the course of the cases confirmed the accuracy of the response. The method is similar to Lignière's technic only that there is no waste of tuberculin; Lignière rubs the skin with a wad of cotton dipped in the tuberculin, while Barabaschi does the rubbing with alcohol.—J. A. M. A.

Cardiac Neuroses

Max Herz (*Wien. klin. Woch.*) saw in one day 2 cases of cardiac neurosis simulating severe organic disease, and in each case there was a low pulse-rate accompanied by low blood pressure. He then examined the records of the last 1,000 patients with cardiac symptoms whom he had seen, in order to discover how often the condition of hypotonia and bradycardia were present either singly or in combination, and with what conditions they were associated. Cases in which bradycardia was a part of an infection or intoxication or was the result of increased brain pressure, an anatomical vagus lesion, etc., were omitted. The patients were almost altogether "ambulant," so that uncompensated cardiac lesions were not represented. A pulse-rate of below 68 per minute was considered to be slow. The number of cases was 73 of hypotonia, 55 of bradycardia, 29 of combined hypotonia and bradycardia. Of the 73 cases of hypotonia alone 48, or 65 per cent., were diagnosed as cardiac neuroses, while 17, or 23.2 per cent., were of arterial affections. Therefore, in doubtful cases, with symptoms which point to cardiac disease, a low blood pressure is suggestive of a cardiac neurosis. In the case of bradycardia alone 49 per cent. belonged to the group of arterial affections, 41.8 per cent. to that of the neuroses. With a combination of the slow pulse and low pressure 69.6 per cent. were of cardiac neurosis and only 27.5

per cent. of arterial affections. These figures lead to the conclusion that in the presence of cardiac symptoms, if insufficiency of the cardiac muscle be excluded, a low blood pressure is on the side of a diagnosis of cardiac neuroses. The other conclusions at which the author arrives are: (1) Extra systoles with a low blood pressure are seen almost without exception only in cases of neurosis. (2) A non-arterial systolic murmur probably does not depend on mitral insufficiency if the blood pressure be low. (3) Phrenocardia is most frequently seen in women, while hypotonia or bradycardia most frequently in men. (4) The dominating symptoms are in nervous hypotonia, painful sensations in the cardiac region, in nervous bradycardia palpitations and in bradycardia hypotonica, general weakness. (5) In bradycardia hypotonica there is a condition of true nervous heart weakness, sometimes with albuminuria and œdema.—*British Medical Journal*.

Medical Education in Vienna

It falls to the lot of a medical man only a few times in his life to visit the great centres of post-graduate study, and when these opportunities come he wants to know where it is best for him to go, so that he may spend the few weeks or, happily, months to the most advantage. For many generations there has been a large exodus to Vienna, and from some recent figures at hand it would seem that the capital of the Austrian Empire is still as popular as ever among American physicians.

The hospital facilities of Vienna are surpassed nowhere in the world. Not only do patients come from the city itself (with its population of nearly two millions) and the immediate neighborhood, but it is no uncommon sight to see a child, perhaps, brought from as far as Russia, so great is the fame of the hospital in Eastern Europe. In fact, the number of patients applying for admission is so great that each bed contains for the most part only a case that is either acutely ill or is of great interest. When the new hospital is completed the building will be one of the finest in the world.

Perhaps in no other centre does one find such a galaxy of famous men, who are nearly all willing to do post-graduate teaching. The courses in all branches are usually so varied and so abundant that one has no trouble in filling up a time-table which will keep one busy from 7.30 a.m., when the lectures begin, till 10 at night. But the fees are high. The average for a general course would be perhaps \$100 a month; in a special course, with operations, a good deal more. The classes, however, are

small, and there is usually the feeling that you have got your money's worth.

A doctor whose knowledge of German is very rudimentary would be pleased to hear that the language problem is not insurmountable. There are many men who go there and get good courses who do not understand a word of German. Most of the instructors can lecture in English, some of it so good that it would make even a Canadian proud if he could speak as well. Those who know German, however, have an advantage, for they can attend whatever lectures they desire. But a very few words and phrases will carry one a long way.

Vienna is a very beautiful city in many ways and has some fine art galleries. Then the outlying villages are all intensely interesting and easily reached by short excursions. Although the cost of living is rather high (\$10 to \$15 a week in a pension), the food is good, and the Viennese make a specialty of catering to the American physician. If, however, one desires to live as the Austrians do, he can get along very cheaply, although the landlards are proverbial for their sharpness in driving a bargain and in "doing the American."

The concensus of opinion among medical men who have worshipped at the shrine of Æsculapius in many places is that Vienna cannot be surpassed as a place to give both quality and quantity of work to a physician who has only a short time at his disposal.

F. A. C.

A New Method of Inflating the Stomach

Stewart Lewis (*J. A. M. A.*) has practised the following method in about 50 cases: He places the patient on the examining table, with the abdomen exposed, and arranges a siphon of carbonated water so that the patient can drink. He directs the patient to drink slowly at first, and then as rapidly as possible. The average patient takes about eight ounces, though in favorable cases half this amount will bring the outline of the stomach into view, while the mixture of gas and fluid gives to palpation a crackling feel and a typical splash apparent to the most inexperienced. The direct method of percussion is employed with a small wooden object, such as a lead pencil or a paper knife. The following objects are attained: Size and position are accurately determined. With practice some idea of the gastric tone may be obtained. Roughly speaking, four ounces of fluid will lower the border of the normal stomach about an inch; in atony it may

lower the border two or three inches. (3) Rapidity of escape of the gas into the intestines will be a crude test of the tone of the pylorus. Tumors may be more readily palpated. This method has the advantage over other methods of being safer and much less unpleasant, and, in the opinion of the author, it is efficient.—*Medical Record*.

Eczema of the Scalp

In a child, cut the hair short and soften the crusts with strips of flannel dipped in oil, and fasten on with a calico cap for six hours. After removal of the crusts an ointment of oleate of zinc or lead may be used, with later, perhaps, a few grains of ammoniated mercury added. Boric acid and starch poultices may be used for the preliminary cleansing, but linseed and bread poultices should be absolutely tabooed, as they too often serve as nutrient media for pus and other cocci.—*Dr. Radcliffe Crocker*.

The Treatment of Ascites by Means of Collargol. RIEHL. (*Munch. med. Wochenschr.*, 1910, No. 21.)

Riehl reports three cases of ascites, one due to ovarian cyst and two to hepatic cirrhosis, in which collargol proved useful. The skin of the abdomen or of the back was thoroughly cleansed and from 3 to 4 grams of unguentum Credé were firmly rubbed in from fifteen to twenty minutes. In each of the three cases the ascites disappeared, not to return until after a considerable interval of time. The good results of the treatment were apparently due to the diuretic action of the collargol, since in every case a marked increase in the amount of urine secreted was observed. Occasionally a watery diarrhoea ensued and also aided in the elimination of the fluid. The number of cases reported is small, but if puncture of the abdomen can occasionally be replaced by so simple a procedure, the latter is certainly worth a trial.—*Interstate Medical Journal*.

The Antitoxin Treatment of Diphtheria

Again are we nearing the season when the problem of diphtheria and its treatment must be met and solved. The writer of this paragraph is forcibly reminded of the fact by the receipt of a modest but important brochure of sixteen pages, bearing

the title, "Antidiphtheric Serum and Antidiphtheric Globulins." A second thought is that here is a little work that every general practitioner ought to send for and read. Not that the booklet is in any sense an argument for serum therapy. It is nothing of the kind. Indeed, the efficacy of the antitoxin treatment of diphtheria is no longer a debatable question, that method of procedure having long since attained the position of an established therapeutic measure. The pamphlet is noteworthy because of the timeliness of its appearance, the mass of useful information which it presents in comparatively limited compass, and the interest and freshness with which its author has been able to invest a subject that has been much written about in the past dozen or fifteen years. Its tendency, one may as well admit, is to foster a preference for a particular brand of serum; but that fact lessens not one whit its value and authoritativeness.

Here is a specimen paragraph, reprinted in this space not so much to show the scope and character of the offering, as to emphasize its helpful tone and to point out the fact that its author was not actuated wholly by motives of commercialism:

"Medical practitioners have learned that inasmuch as the main problem presented in the treatment of a case of diphtheria is the neutralization of a specific toxin the true antitoxin cannot too soon be administered; moreover, that, antitoxin being a product of definite strength, a little too little of it may fail when a little more would have succeeded—hence, larger or more frequently repeated doses are becoming more and more the rule. One more point: if the medical attendant is prompt, as he must be, and fearless, as he has a right to be, the full justification of his course will hinge upon the choice of the best and most reliable antidiphtheric serum to be had; for while there is little or no danger of harm ensuing from the use of any brand issued by a reputable house, the best results—which may mean recovery as the alternative of death—can only be hoped for from the use of the best serum."

The brochure is from the press of Parke, Davis & Co., who will doubtless be pleased to send a copy to any physician upon receipt of a request addressed to them at their main offices, Walkerville, Ontario.

The After-care of a "Bad Cold"

The young, virile, robust individual who contracts what is commonly termed "a bad cold" rarely suffers long from such affection, as the superior resisting power of such persons soon

overcomes the virulence of the infecting agent, and recovery is rapid and complete. It is apt to be very different, however, with those whose circulation is less active, and whose phagocytic activity is "below par," due to advancing years or general devitalization, from whatever cause. For such patients something more than expectorants or respiratory sedatives is required. General nutritive and reconstituent measures are indicated, and a quickly acting and substantial medicinal tonic almost always materially hastens recovery in such cases. Pepto-Mangan (Gude), with which is combined an appropriate dose of strychnia, is the ideal supportive treatment, as the combination not only tones the circulation and the nervous system, but also supplies, in palatable, tolerable and immediately assimilable form, the organic iron and manganese needed to revitalize the blood and infuse force and vigor. In the case of young children it is perhaps wise to depend upon Pepto-Mangan (Gude), without strychnia.

A Valuable and Seasonable Remedy

To reduce fever, quiet pain, and at the same time administer a laxative and tonic is to accomplish a great deal with a single tablet, and we would especially call attention to the wide use of Laxative Antikamnia & Quinine Tablets in chronic or semi-chronic diseases which begin with a severe "cold." Among the many diseases and affections which call for such a combination we might mention la grippe, influenza, coryza, coughs and colds, chills and fever, and malaria with its general discomfort and great debility. Attention is particularly called to the therapeutics of this tablet. One of its ingredients acts especially by increasing intestinal secretion, another by increasing the flow of bile, another by stimulating peristaltic action, and still another by its special power to unload the colon. When the temperature of the body is above normal, conditions are especially favorable for germ development. It is a matter of every-day observation that a simple laxative is often sufficient to relieve the most dangerous complications.—*Archives of Pediatrics*.

Moist Heat

Thermotherapy in inflammatory conditions seems to prove most effective when applied in the form of moist heat.

The relaxation of pressure by infiltrated and swollen tissues upon nerve endings, as experienced by the relief of pain, specifically proves this.