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THE CANADA LANCET.

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE,
CRITICISM AND NEWS.

VOL. XXII.] TORONTO, JAN., 1890. [No. 5.

HYPERTROPHIC RHINITIS, OR HYPERTROPHIC NASAL CATARRH.*

BY PRICE BROWN, M.D., L.R.C.P., TORONTO.

The mucous membrane of the nasal passages differs from all other mucous membranes. 1st, in being deposited or built upon rigid walls; and 2nd, in the tract being intended for the transmission of respiratory currents only. It follows, therefore, the foundation of the membrane being stationary, and the epithelial surface free from the cleansing power of friction, that the results of inflammation have a tendency to accumulate, the hypertrophic processes being almost unimpeded.

In this disease we have a true hypertrophy of all the normal elements of the mucous membrane. The principal changes, however, are found in the corpora cavernosa or deeper layers of the membrane. Here we have an abnormal deposit of connective tissue elements, together with infiltration by immense numbers of new cells. At the same time there is morbid proliferation of the surface epithelial elements. The glandular structures are likewise involved, though to a less extent. As the hypertrophy progresses, new blood vessels are formed, which in turn still further produce excess of growth. The result of the combined processes is, that the whole of the mucous membrane affected becomes materially thickened; and it throws out an increased secretion of mucous, which takes on a somewhat purulent character, by its admixture with newly proliferated cells.

This thickening or swelling is not, however, equally distributed. The parts affected become irregular; some parts more hypertrophied than others. Those chiefly involved are the free surfaces of the turbinated bones; the inferior being

most frequently affected, the superior least, and the middle one occupying a position, both with regard to frequency and severity, between the other two. Quite frequently, also when the hypertrophy is severe, the septum likewise becomes involved.

The venous sinuses over the posterior portions of the middle and lower turbinated bones being larger than in the other localities, these parts are likewise sometimes affected with hypertrophy, though not so frequently as the middle and anterior portions. Complete stenosis as a result, however, is more frequently found in the posterior, than the anterior or middle regions.

Etiology.—In the great majority of instances, hypertrophic rhinitis arises either from a succession of attacks of acute rhinitis, or as a continuation or result from chronic rhinitis. Hence the initial factors of these diseases are the direct causes of the hypertrophy. In some instances the disease is said to be idiopathic in its origin. Improper treatment of nasal diseases will likewise lead to hypertrophy, and I have known it produced by injury.

Symptoms.—One of the most marked symptoms of this troublesome disease is interference with nasal breathing. As the disease advances, the thickened membrane becomes much more sensitive to the effects of cold, damp or other irritants, resulting in still further thickening of the already hypertrophied tissue. When in this condition, there is often complete occlusion by the mere distension; while in advanced cases the true hypertrophy may be sufficiently great to produce permanent stenosis.

Any position favoring gravitation will sometimes produce temporary stenosis when hypertrophy exists. For instance, lying on one side will occlude the dependent nasal cavity. Lying on the other will relieve it, the occlusion being reversed; while the supine position may result in occlusion of both nostrils.

One of the physiological functions of the nose being to purify, moisten and regulate the temperature of the air of respiration, the occlusion of that organ necessitates the breathing of impure air of diverse temperatures. The result, in many cases, being the formation of chronic pharyngitis and laryngitis; and when a predisposition to lung disease exists, the development of tuberculosis also.

The voice acquires a nasal twang; and when

*Read before the Toronto Medical Society, Nov. 12, 1889.

the throat is also affected, the tone becomes somewhat muffled. The eyes may become red and watery from pressure upon the nasal duct; hearing may be compromised by occlusion of the Eustachian tubes; the sense of smell may be suspended or destroyed; and the face, from the continued breathing through the open mouth, loses its natural expression. I might add that periodical frontal headaches are often complained of.

The nasal discharges are usually largely augmented as well as changed in character. Thick viscid mucous gathers in the tortuous nasal cavities, and owing to the occlusion is very difficult to be got rid of. The whole of the glands, in connection with the inflamed tissue, pour out an abnormal amount of secretion of a mucous or muco-purulent character. This accumulates in the sinuosities of the turbinated bones, forming fetid masses or scabs, and rendering the breath offensive, the drainage backwards often extending the catarrhal disease both to the pharynx and larynx.

On examination of the parts anteriorly, the mucous membrane will usually present a somewhat reddened appearance. The lower turbinated bone, covered to a more or less extent with mucoid discharge, will project towards and sometimes impinge upon the septum; while the surfaces of both may be somewhat irregular. On pressing the parts with a probe, the swelling becomes indented, and but sluggishly resumes its wonted contour. The lower turbinate as a rule hangs downwards as well as toward the septum; while the middle one when hypertrophied, projects in a rounded manner directly inwards. Hypertrophy of the upper turbinated does not usually occur; when it does, the enlargement is limited.

A thorough posterior examination is attended with much more difficulty than an anterior one. Still by the use of the rhinoscope, the posterior ends of the upper and middle turbinates, and the upper part of the lower one, can in many cases be seen, as well as the greater part of the septum. When hypertrophy exists, the membrane will be found of a grayish color, and projecting into or filling entirely the posterior channel. This may be confined to the lower turbinate or may involve the middle one also—the septum frequently taking part in the abnormal thickening.

Some authorities divide posterior hypertrophies into two divisions, white and purple; the former

being harder and more frequent than the latter. The chief difference between them consists of the soft venous character of the purple variety.

Diagnosis.—The anterior diseases which might be mistaken for hypertrophic rhinitis, are acute rhinitis and simple chronic rhinitis. The former of these two is diagnosed by its recent origin, smoothness of surface, greater sensitiveness, higher color, and quicker resilience on pressure. The latter, by the general evenness of the inflammatory action, there being an absence of the irregularities of hypertrophy. There is also less tendency to stenosis; and at the same time, a quicker response to ordinary local treatment.

Posterior hypertrophic rhinitis might sometimes be confounded with posterior nasal polypi, on account of similarity in color. The polypi, however, are softer to the touch, more movable, and exhibit a brighter and smoother surface.

Prognosis.—Rhinal hypertrophy rarely if ever assumes a dangerous form *per se*. In some cases it progresses to complete occlusion, remaining in this condition indefinitely, or until past middle life, when it gradually recedes, leaving the parts almost in a normal condition again. In the majority of instances, however, if not relieved by surgical treatment, it will, after lasting for years, pass on into atrophic rhinitis, with all its distressing and in many instances, loathsome results. The sense of smell may be completely lost, taste materially affected, and hearing in a great measure destroyed.

Treatment.—If hypertrophic rhinitis came under observation during the early stages of its development, local medical treatment would in many cases effect a cure. Unfortunately, however, the hypertrophy is usually far advanced when the patient presents himself for treatment. It is when partial or complete stenosis so interferes with the natural respiratory effort, and with the normal voidance of the mucoid discharges, as to make life miserable and the breath offensive, that the patient usually seeks for relief. In these cases operative interference becomes necessary, to produce anything like a good result.

In the early stages, mild alkaline sprays or douches are very effectual in cleansing the rhinal cavities, being applied both anteriorly and posteriorly as required. While fine sprays may be used cold, douches and washes with the posterior syringe

should be tepid. After cleansing, mild astringents applied in the same way, and continued regularly for several weeks, will sometimes so check inflammatory action and so constrict the parts, that the hypertrophy will gradually be absorbed.

Operative interference when necessary, may be accomplished in various ways. The means at our command consisting of caustic acids, cold and cautery snares, transfixing needles, saws, galvano-cautery knife, etc. Of these, the first and the last meet with the most general favor and the largest use.

Of the acids, the most highly recommended are the nitric, glacial-acetic, and chromic. Nitric being the most destructive, requires much care in its application. If applied in anything but small quantities it is liable to produce deep-seated ulceration. It is, however, very effectual in the destruction of hypertrophied tissue, and properly guarded, will do good work. To use it, a probe is wrapped with absorbent cotton and then dipped in the acid, any extra drops being removed by a blotter. Glacial-acetic acid has the reputation of being a safer agent, but being less powerful requires many applications to produce a good result. Seven or eight touches, at the interval of a week, will be required to produce as much effect as one of nitric acid. Both acids are applied in the same way.

Of all three, chromic acid is most popular, and is the only one that I have personally made use of. A convenient method is to heat the end of a probe or even stilette of a catheter in a spirit lamp and apply it to the crystals of the acid. Enough will adhere for one or two applications. Chromic acid gives very little pain; and three or four touches at intervals of several days, will often give very good results. As with the other acids named, a saturated solution of bicarbonate of soda can be applied, to neutralize any excess of acid. Before the use of any of them, it is better to wash out the nasal cavities with the alkaline spray. Cocaine can also be used, as in the more serious operations, to produce local anæsthesia.

The cold snare is more theoretical than practical, and rarely used, its place being taken by the galvano-cautery snare. The latter is serviceable in large posterior hypertrophies, when the growth is too extensive to be removed by the cautery knife; and of course necessitates the use of the rhinoscope. It is also used in large anterior hy-

pertrrophies. In these cases the transfixing needle is employed to elevate and steady the growth, during the manipulation of the cautery. The nasal saw and Woakes' plough are both of them occasionally used, when the hypertrophy extends beyond the corpora cavernosa to the turbinated bones themselves.

The galvano-cautery, however, has many advantages over all other methods, in the treatment of nasal hypertrophies. Not only does it produce comparatively little pain, and even this is within our control, but we can definitely limit both the depth and extent of its action. Another important feature of electro-cauterization is the exceedingly limited amount of local inflammation which it produces. Even after severe operations, patients rarely complain of discomfort, after the immediate effects are over.

It is a method of treatment, however, which requires the utmost care as well as considerable skill on the part of the operator. Although by means of the nasal speculum and the rhinoscope, he may see to place the electrode upon the hypertrophied tissue, yet the depth and extent of the burning in each case, must be largely controlled by the sense of touch. Too broad an application would destroy too extensive a surface of the ciliated epithelium; while too deep a burning would penetrate the corpora cavernosa, lay bare the turbinated bone itself, and produce a sloughing ulcer. It is as well to remember also, that the application of any of the escharotics to the nasal membrane, may in some cases give rise to erysipelas of the face. It is satisfactory to know, however, on the authority of Bosworth, that with the galvano-cautery the risk in this respect is comparatively slight.

Clarence Rice tells us that almost any effect can be produced by this instrument, the result being dependent altogether upon the manner in which it is used. Its potency can scarcely be over-estimated, varying from the gentle action of a simple astringent, all the way up to a destructive agent, accomplishing more than the wildest enthusiast could desire. Rice cites an instance where the hypertrophy had been removed, but dense bands of cicatricial tissue had taken its place. The nostrils were rendered too wide, the glandular action of the mucous membrane destroyed, and dry pharyngitis, with recurring neuralgia, was the lasting result of over zealous treatment.

Knight also gives an instance, where large posterior hypertrophy had been removed too extensively by the surgeon; the result being that, after the first few months, the patient became a permanent sufferer from pharyngitis sicca.

Shurly says that too decided surgical interference, either by galvano-cautery or other means may produce permanent atrophic nasal catarrh.

It was rash use of this excellent method of treatment which placed the electric battery in disuse for so long a period after it was added to the rhinologist's armamentarium. In some instances, the septum was perforated, in others the turbinates destroyed; and thus the curable was transformed into the incurable by the use of an instrument which is now considered to take the highest rank for all operations within the nasal cavity.

During the last few years, the use of the galvano-cautery has been established upon a sure foundation. Recent improvements enable the operator to illumine almost the entire nasal cavity; while the experience of specialists, so widely published, enable him to avoid the pitfalls that have been so disastrous to others. Voltolini, Michael, Sajous, Morell-Mackenzie, Rice, Shurly, Bosworth, Delavan, in fact all the leading laryngologists strongly support its use; and I feel sure it occupies a place in rhinology from which, it can never be removed.

My own treatment of the hypertrophic tissues, during the present year, has been almost exclusively by galvano-cautery; and I will close by giving a short history of the cases as they occurred.

January 30th, Case 1. Mr. F. J. P., journalist, married, age 31 years. Father and mother died of consumption. Personally tolerably healthy; has had catarrh for two years, chiefly on right side, with partial stenosis; has had hæmorrhage from right nostril every day on using handkerchief, for three or four weeks. On examination I found two dark polypi hanging from middle turbinated bone. After applying a solution of cocaine, I removed one by snare. There was considerable hæmorrhage. This was so great that I did not remove the second polypus, but gave an astringent solution to be applied by patient. Two days later he returned, and I removed the remaining one with forceps, and applied chromic acid to the root.

I then discovered a large hypertrophy of middle

turbinated, immediately behind the attachment of the polypi, and as the patient was going away on business for some time, I delayed operating until his return.

On March 5th, I used the galvano-cautery, passing the knife longitudinally over the growth in two places, from back to front, at white heat. There was not much suffering and after local treatment for some time, patient made a good recovery. The hæmorrhage did not occur again, the catarrh was greatly relieved, and there has been no return either of polypi or hypertrophy.

March 1st, Case 2. Mrs. R. D., age about 30 years. Has been suffering from catarrh for two years, with progressive stenosis of right nasal cavity. There has also been frontal headache and offensiveness of breath.

On examination, I found hypertrophy of septum and inferior turbinated to such an extent, that it was impossible to pass a probe through without pain. Superficial ulceration, produced by pressure, existed where the parts were in contact. There was also hypertrophy of the middle turbinated, though to a less extent.

After cleansing, I applied by spray and absorbent cotton a four per cent. solution of cocaine. With difficulty I passed the cautery knife backwards between the lower hypertrophies, and cauterized from behind forwards; making two cauterizations at the one sitting upon the lower turbinated and septum. The subsequent treatment consisted of sprays and the local application of ol. petrol. Three weeks later I made a single application of the cautery to the middle turbinate. The patient did not come as regularly afterwards for treatment as she should have done; still the result was complete removal of the stenosis, abatement of the headache, and subsidence of the catarrhal symptoms.

Sept. 10th, Case 3. Mrs. W., age 44, family history good. Has had naso-pharyngitis for a considerable length of time, with impediment in breathing through right nasal cavity. A year ago, her family physician told her she ought to go to a specialist, to have a growth in the right naris removed. On examination I found hypertrophy of the right turbinate. The application of the cautery was followed by considerable reduction. Four weeks later I made a second application; subsequent treatment similar to that in former

cases. In this instance the hypertrophy and catarrh have both disappeared, and the patient can breathe through one nostril as well as the other.

Sept. 3rd, Case 4. Miss W. D., age 21; family history good. Has had nasal and naso-pharyngeal catarrh for more than a year, confined chiefly to the right anterior turbinate.

At first, I confined the treatment to the free use of sprays, hoping that their alterative and astringent character would have the effect of producing absorption of the hypertrophy. There was considerable amelioration of the catarrhal symptoms; but two weeks later, I found that to produce permanent benefit, the cautery would have to be applied. This was followed by a result similar to that in the cases already mentioned.

Oct. 22nd, Case 5. Mr. T., from Ontario Co., retired farmer, age 55; family history asthmatic. Has had asthma himself for more than a year. About the time of its commencement, he took a cold in the head which has been continually getting worse up to the present time. He spent several months during the early part of the year in the North-west, hoping that the climate might prove beneficial to both the asthma and the head trouble. In this he was disappointed, the latter being aggravated by the time of his return.

In this case the stenosis on the left side was almost complete. By strenuous effort he could inhale through the left nostril; but to exhale through it was impossible. On the right side breathing was slightly freer.

On examination, I found a nasal polypus on right side, and also enlarged middle turbinated bone. On the left, examination revealed complete occlusion—the middle and inferior turbinates being both very much hypertrophied. On posterior examination with the rhinoscope, I found gray hypertrophy on the left side also; the enlargement extending out through the choana, and hanging into the naso-pharynx. Its position accounted for the occasional power of inspiration.

After applying cocaine, owing to the limited space, I removed the polypus with forceps; and then applied the galvano-cautery to the hypertrophy on the same side. I would have preferred deferring operation on the left side; but Mr. T. being anxious to return home as soon as possible, insisted upon immediate treatment. Consequently I applied the cautery without delay to the anterior

hypertrophies of both the middle and inferior turbinates on the left side, having first anæsthetized the parts with an eight per cent. cocaine solution.

Two days later, with the aid of the rhinoscope, I passed the cautery blade freely over the posterior hypertrophy, also touching the thickened septum of the posterior choanæ. Subsequently he came twice a day for local treatment.

When he left for home on the 29th, the raw surfaces had not entirely healed; but the stenosis had completely disappeared. He could, after spraying out the discharges, breathe with perfect freedom through both nostrils; and during the last two or three days the attacks of asthma had not been of the usual severity. Of course I gave him local treatment to carry on at his own home, until his recovery would be complete; and he promised to return, if the result was not as satisfactory as we desired.

Remarks.—There are several things in connection with the history of these cases, which are perhaps worthy of note. In eighty per cent. of them, or in four out of the five, the hypertrophy was confined to the right side; and even in the fifth, the right middle turbinated was involved. I might also add, that in two other cases that are at present under treatment for nasal disease, the difficulty in each of them is chiefly on the right side. In looking over the medical literature at my command, I have not noticed the comparative frequency of hypertrophy on the two sides referred to. Consequently, I am unable to say whether my own experience is merely a coincidence or not.

In this connection, I might also refer to an article read by Dr. Major, of Montreal, at the last meeting of the American Laryngological Association, and published in the *New York Medical Record* for August. The title was "The Relation between Facial Erysipelas and Erythema on the one hand, and Intra-nasal Pressure on the other." The author expressed the view, founded on his own personal experience, that these skin diseases were often produced by the internal hypertrophies, and that the removal of the latter would be followed by the spontaneous disappearance of the skin disease. In none of the cases that I have reported, was there any appearance of erythema, either before or at the time of treatment. Further observation may be attended by a different result.

Note to Case 5.—Four weeks after leaving the city Mr. T. wrote me that while the asthma was only slightly improved, he could breathe through both nostrils as well as ever.—P. B.

One more remark in reference to the last case. The theory has been advanced recently by eminent rhinologists, that there is a direct relation existing between intra-nasal pressure and asthma. In his case the hypertrophy and asthma appear to have originated about the same time. Did the former and the latter occur as a sequence of cause and effect? That the asthmatic symptoms were less severe during the last days of his treatment, appear to point in that direction. Still the case is too recent to base any conclusion upon. I hope, however, to be able to report upon this matter at some future time.

PHYSICAL EDUCATION.

BY B. E. M'KENZIE, B.A., M.D.

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(Continued from December number.)

The value of physical exercise is not limited to its production of muscular power; it is the best means available for strengthening and keeping in health the delicate and important structures which encase the vital organs, and on whose good development the health and ability of the organs must greatly depend. It is as valuable to him who works with his brain, as to him who works with his hands, because it will enable him to prolong and sustain his labors with safety to himself and increased good to his fellow-men. It is in childhood and youth while every tissue and organ is plastic, changing, and capable of change, that physical no less than mental and moral culture should be obtained. The strong limbs and shapely frame, the strong heart and ample lungs, in the well-proportioned and elastic chest place a premium upon the mental and moral power of their possessor in every work of life.

Of the many forms of mal-growth, to be found, on enquiry, in every school, all are capable of improvement or rectification by well-chosen, graded systematic exercise. By the use of the parallel bars, clubs and other means calling into play the

thoracic muscles, the hollow chest may be rounded out and its growth increased three or four inches in as many months. When the shoulders are rounded forward and the anterior chest wall is made to restrict the space allotted to the lungs, the muscles which should hold the shoulders in place may be taught to do their duty and be imbued with new strength for their performance; the spine which is no longer erect, but which has yielded to the superincumbent weight because the muscles are no longer able to keep it erect, may resume its normal, graceful curves by re-educating the muscles to the duty so long forgotten.

Long-continued attention to physical exercise, guided by a knowledge of the laws of physiology, is capable of doing much to counteract disease, and to remedy or alleviate its dire effects. Blaikie, a well-known American athlete, an oar in a Harvard crew, and a writer on this subject, was considered a hopeless consumptive when he first went into training. Dr. Winship, who lifted 3,000 pounds, was but a puny lad, and commenced training for the avowed purpose of fitting himself to punish an older student who had treated him badly. Especially in Europe is this a recognized mode of treatment in various forms of chronic disease, in deformities arising from general weakness, and resulting so frequently from faulty positions assumed by girls and boys, and especially when at school. Cases that were formerly treated with but very unsatisfactory results by means of shoulder and spinal braces, and other apparatus for correcting faulty, acquired positions, are now affording the happiest results through the use of well-chosen exercises, selected according to the needs of the case, and graduated by the ability and progress of the patient. In pursuance of this method, when the body has been set free from unphysiological restraints, the illused or unused muscles have, more or less perfectly, resumed their proper functions, have increased in volume and power, the form has become more erect, the chest acquired greater power of expansion, and the entire bearing and physique have greatly improved.

McLaren, of Oxford, took charge of twelve officers of the British army to qualify them as instructors in gymnastics, and carefully ascertained and registered the development of each at the commencement of his course of instruction, and at certain intervals afterward. They ranged between

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19 and 29 years of age, between 5 ft. 5 in. and 6 ft. in height, between 128 lbs. and 174 lbs. in weight, and had been in the service of the army from 2 to 12 years. The muscular increase of arms and shoulders, and the expansion of the chest was such as to have a ludicrous and embarrassing result, for before the fourth month, several of the men could not get into their uniforms, jackets and trousers, without assistance, and when they had got them on they could not get them to meet down the front by a hand's-breadth. One of these men had in four months gained five inches in growth of chest. Who shall estimate the value of that gain of five inches to the working capacity of the individual, and to his power to resist disease. It means five inches more space for the work and development of heart and lungs. This is not all. Before such a gain could be made the whole frame-work of the system must have partaken of the benefit, and every organ within the body have been proportionately strengthened. The greatest improvement occurred in those who were the youngest. McLaren adds: "There was one change—the greatest of all—to which all other changes are but means to an end, are but evidences more or less distinct that this end has been accomplished, a change which I could not record, which can never be recorded, but which was to me, and to all who had ever seen the men, most impressively evident, and that was the change in bodily activity, dexterity, presence of mind, and endurance of fatigue; a change a hundredfold more impressive than anything the tape-measure or the weighing-chair can ever reveal."

The association of the physical, mental and moral is a natural one, and unchangeable in its essential principles. It was expressed in Juvenal's well-known line, "Mens sana in corpore sano." At this juncture in our educational development, when we are laying the foundations in this young nation upon which we hope to build an edifice worthy in some degree of our ancestry, and reflecting the light and influences that have come to us through the ages, the acknowledgment of the relationship which exists between the material and spiritual, the physical and mental would favor a better appreciation of the importance of health and hygiene in their widest and fullest significance, would afford the best antidote for

many of the spiritualisms that are discrediting the intelligence of the close of this century, and would remove barriers which are now standing in the way of our attainment of that full-orbed individual development which is the only basis upon which can rest national greatness. The widespread diffusion of physical culture would be one of the most potent factors for increasing the public health and longevity, diminishing disease both by prevention and cure, augmenting the world's power for work by adding to the usefulness and activity of the individual, and promoting the material prosperity, the happiness and the morality of mankind. Vigorous and systematic muscular exertion has a powerful influence in developing the entire character, it favors the exercise of self-denial, perseverance and endurance; it strengthens the will and confers a consciousness of increased power; it begets self-confidence, resolution and courage; it subdues the passions and elevates the spiritual and physical energies.

Of the 147 Cambridge men who constituted the crews of 1829-1869, 28 % attained to the highest academical distinction, showing that mind and muscle are not unequal yoke-fellows, but that they are well able to work together with mutual and reciprocal advantage. Of the aquatic champions mentioned by Dr. Morgan in his book on "University Oars," there were three bishops, two judges, one renowned historian, and many others of intellectual distinction. At Oxford, the general average of class-men for a given time was about 30 % at examinations, but cricketers attained 42 % and rowing men reached 45 %. The best freshmen crew that Yale ever had was made of ten men and a coxswain, only one of whom was below the first scholarship division, and he was in the second at a time when there were three divisions.

Dr. Beddon, in a paper entitled "The Stature and Bulk of Man in the British Isles," says: "If we examine only a single race or reputed race at a time, we shall find that wherever that race attains its maximum of physical development, it rises highest in energy and moral vigor."

Of persons who pass the age of 20 years, the average age attained at death is about 50 years; but in a list of 500 of the greatest names in history made for the purpose of finding the age at which they did their best work, it was found that the average age attained was about 62 years.

Another list of 240 illustrious names, gives their average age as 66 years. The great men of the past have had not only good brains, but good bodies, and the time given to physical culture was productive alike of increased tenure of life and of the highest intellectual attainment. Gladstone has his private gymnasium, and is found regularly taking outdoor exercise, and especially at his favorite pastime—felling trees. On the morning of the day when he introduced his measure relating to Home Rule for Ireland, and when the whole world was his audience, the first hour after rising was spent in his gymnasium. Bismarck has always been devotedly fond of sports, and is as earnest in their pursuit and advocacy as in his work of diplomacy.

It has been found at Harvard that students take about the same rank in acquired gymnastics as they do in their regular studies. Brain and nerve substance are behind every well directed movement, indeed the association is so intimate that it is impossible to assign to each, *i.e.*, to muscle and nerve, its exact share in the result. Du Bois Raymond has shown, from the standpoint of a comparative zoologist, the necessary connection between brain and muscle, and that by far the most marked influence of physical exercise is upon the nerve centres. Gymnastics, fencing, riding, swimming, calisthenics, are as much exercise of the cord and central nervous system as of the muscles and joints. The gracefulness of every movement depends as much upon the proper coördination of the various groups of muscles as upon their individual power; and the power of coördination or power to determine harmonious action is the special work of the nervous system. The gray matter of the brain, *i.e.*, the active portion in which are located the centres that control speech, action and thought, is at work, equally with the muscles, in securing harmonious movement, is exercised at the same time and is the gainer through the law of self-improvement. Faculties, functions and organs grow and are strengthened by exercise, and are weakened by disease. The child develops brain every time it makes a well-directed effort to grasp the object of its desire. The movements of the child are as essential to the development and well-being of its brain, as the integrity and health of the brain are to the growth of its hand.

In this work, *time* is an important element.

Franklin's theory that intense energy in action for a short time is equivalent to slight force acting through a much longer period, is not sound or safe doctrine.

All-important as it is that boys and young men should give more attention to the perfecting of the body, yet it is to the girls and women that this subject should be of greatest interest. Gail Hamilton says: "A girl can go to school, pursue all the studies, and know them—not as well as a chemist knows chemistry, or a botanist botany, but as well as they are known by boys of her age and training, as well, indeed, as they are known by many college-taught men—enough at least to be a solace and a resource to her; then graduate before she is eighteen and come out of school as fresh and eager as she went in." No doubt this is strictly true, and yet how many there are who fail to realize this fortunate result, not from any inherent unfitness for the work to be done, nor because in any way inferior mentally or physically to young men and boys of the same age; but because, *first*, that custom has imposed habits of dress that are injurious; *second*, that the temptation is greater to live within doors, deprived of sunshine, fresh air and exercise; and, *third*, because the laws of nature demanding special attention during the years usually devoted to school, are nearly always ignored.

That the type of breathing in woman is not the same as in man, that in the former it is nearly altogether upper thoracic, and in the former general, calling into play the lower portion of the chest as well as the upper, is manifestly the result of a long period of dressing in such a manner as to constrict the lower portion of the chest and hamper its movements, and is a potent factor not to be omitted in recounting woman's disability. The temptation to live indoors should be met by the regular pursuit of games and exercises that are adapted for boys and girls alike. The consideration of the third point brings up the question of the co-education of the sexes, which has been considered as an intellectual problem, and as a social problem, but which for its effective solution requires the knowledge of the physiologist. In the matter of the intellect, no teacher calls in question the statement that the girl is the boy's equal; so far as concerns morality, there is abundant testimony that young men and women, as well

as boys and girls, are more amenable to discipline under co-education. Dr. Weir-Mitchell says: "The time taken for the more serious instruction of girls extends to the age of eighteen, and rarely over this. During these years they are undergoing such organic development as renders them remarkably sensitive. . . . To-day the American woman, to speak plainly, is unfit for her duties as woman, and is perhaps, of all civilized women, the least qualified to undertake those weightier tasks which tax so heavily the nervous system of man. She is not fairly up to what Nature asks from her as wife and mother. How then will she sustain herself under those still more exacting duties which now-a-days some are so eager to have her share with man? In consequence of the great neglect of physical exercise and the continuous application to study, together with various other influences, large numbers of our American women have altogether an undue predominance of the nervous temperament."

One objection to our present methods of education of girls is the unintermitting demand for brain work. It is impossible that the system should, at the same time, do two things well—develop the body in all its wealth of special characteristics, and at the same time perfect the intellectual processes. Good productive thought implies a healthy brain, and a healthy brain implies an abundant supply of good healthy blood. But this cannot be supplied to the brain without detriment to the functions of the developing physical organism.

Throughout our colleges and schools there is no greater need to-day than that systematic education for the body be given to both boys and girls and to young men and women, such as will prevent the more intellectual, ambitious and worthy from falling a prey to the disabilities which hamper their usefulness, and hand down to posterity the highly-wrought brain and feeble constitution which are so rapidly increasing the numbers that fall as victims of insanity, and cause the present to be a time marked—as never was any age before—by diseases of the nervous system. Our present methods of education provide for the non-survival of the fittest. If you find the boy or girl of clear brain, high ambition and lofty motive, you find parents and teachers alike urging that all attention be given to the cultivation of the mind, to the neg-

lect of the body; and the average result is that those whom Nature endowed most favorably with the graces of head and heart, either fail in the race or increase in their person and in their children the number of those whose over-wrought nervous organization is characteristic of this age.

Though our children have grown weary, and some have been mentally and physically stunted and others have gone through life bearing its duties and responsibilities as if they were burdens, and have plodded on with discordant nerves, steps that showed no buoyancy and with health much below par, while others have let go their hold upon life before its normal cycle had passed—all through the one-sidedness of our education and in satisfying the demands of the machine; yet there are indications that wiser counsels are prevailing, that we are coming to understand that the beauty and power and usefulness of the intellectual, the moral, and the spiritual have a natural relation, that may not be ignored, to this physical tenement which is a necessary concomitant of our existence here. The girl who learns to swing the clubs, use the vaulting pole, run a mile without tiring, poise gracefully in every natural position, and becomes free from every restraint that hampers and retards the healthful exercise of important organs, becomes thereby the honored bearer to humanity of greater blessings than she who acquaints herself with all the rules of art. The boys and girls who are learning the elements of physiology and hygiene, and who through practice are learning the use of every group of muscles and due discipline and control of the nervous system, who are securing for themselves due development of important tissues and organs, are not they who will be most likely to fall victims to the wiles of the quack in science, politics, or religion, and will not make recruits to fill up the ranks of the various isms and fads and frauds that abound in our time. It has been shown that they who give most attention during their school days to physical culture are not drones in the recitation room. They are full of life and vigor, are the influential men upon the campus and in society, but especially are they the successful and aggressive men in after life. Let us, in our young country, build up a system of education commencing with the children and going up through every grade of school and college life,—a system that will be as broad as the needs

of the human organism, as free as it is now trammelled, that will produce not a body, not a soul, but a man educated for manhood, a woman educated for womanhood, and both for humanity.

CLINIC BY WILLIAM PEPPER, M.D.

Prof. of Medicine University Hospital, Philadelphia.

AN OBSCURE CASE OF ABDOMINAL PAIN COMPLI- CATED WITH MORPHIA-EATING.

In the search for the truth in obscure and uncertain cases, I think that far too little importance and emphasis is placed on the "facies" of a patient by the rank and file of physicians. The face if rightly read may be an open answer to many an otherwise unsolved puzzle. We can learn much from a man's expression if we will but look. For example, here is a man whose face which at once attracts and interests me, will prove a clue, I think, towards the solution of his hitherto unexplained case. We are told that he has been unable to work for nine years and for the major part of that time has been in bed, owing to an illness which has lasted that period. But his countenance, contemplative, half-contemptuous look is not that of a man worn out by chronic disease. In the first place there are not many chronic troubles which last ten years; and when they do, they make their marks as they go along. The patient is slowly broken down; piece by piece, his strength, his courage, and those properties which go to make up what we call "self" are slowly sapped. This man's face does not present such a story; it is rather the face of a man who has been accustomed to see his case baffle his doctors, without experiencing the depressing influences of an organic trouble. Then again, he tells a different story from that which a chronic case would relate. Let us hear it. At the outset, nine years ago, he began to experience paroxysmal attacks of pain in the upper zone of his abdomen. These pains grew worse through the attacks until they were somewhat relieved by spells of vomiting. Later the pain became more or less constant, with these occasional exacerbations. The matters vomited were very offensive, liquid, blackish in color, but as far as I can determine not known by microscopic examination to be blood or bile. The pain he says, ran across his body from the left just below

the edge of his ribs and was of such a sharply-defined nature as to make him suspect that some animal was darting to and fro. His skin at the same time, seemed to be hyperæsthetic with this, occasionally, he had periods when he suffered from retention of urine; from the account it would appear that the catheter did not carry off the water until the bladder-walls were stimulated to action by outside irritation such as punching or kneading.

He went into a hospital after being under treatment for two years outside without relief. Here to quiet his intense paroxysmal pain, he was given morphia; this practice was kept up for eighteen months until he was in the habit of taking five grains hypodermically in the twenty-four hours. Since dismissal, he again experiences the pain though less intensely, and has reduced his morphia taking. As he lies here to-day he tells us, he is here to do or die, that he is willing to undergo any operation or course of treatment however rigorous if he is only relieved. As we approach this case, let us first endeavor to analyze the course of his trouble. We seem to have three stages: first, the developing disease, second a morphia-eater; and third, a decrease of morphia taking with a recurrence of the original pain, for he confesses to the occasional use of that drug, which after careful examination we find is taken pretty regularly during the day.

It has always been my experience that when morphia has been given for any length of time for the relief of pain that there occurs a mimicry of the disease on the gradual withdrawal of that drug; a simulation of the original aches and pains which imitate the real complaint so cunningly that it is often difficult or impossible to decide their true source. We will remember this element when we reach the history of the trouble again. The fact complicates an originally obscure case.

It was not nephritic colic; here the pain is anterior in the renal region along the course of the urethra, and the passage of a calculus is common. Vomiting is common but the case is clearly not of this sort. Neither is it hepatic; true it is abdominal, but there never has been jaundice or gall-stones found after careful search. This reduces it to gastralgia or enteralgia. The position of the pain, and the other signs all point to the stomach as the original seat of trouble. This was true pro-

bably nine years ago, but what of the condition to-day. It will be necessary to eliminate the morphia element before we can study the case successfully or intelligently. Without demonstrable organic lesion, it is never safe to attempt to diagnose any case into which such a factor enters. Then we will study what is left; new symptoms will probably then rise up which will furnish good data.

In conquering the morphia-habit it is necessary for the physician and patient to work hand in hand; there must be forbearance and patience and sympathising encouragement on the one side and conscientious, earnest effort on the other. In such a condition of things, it will be possible to overcome this dread trouble, but it can be done in no other way. Simultaneously with this will be established a tonic nutrient treatment, a regular diet and good moral control. Electricity may be used to tone up the system, some analgesic which is not an anodyne will be given, as antipyrin. We will not attempt any lavage or nephrectomy however, until we clear up the case sufficiently to make a diagnosis reasonably certain and not mere guesswork.

Selected Articles.

THE COMMON DISEASES OF THE BREAST.

BY CHRISTOPHER HEATH, F.R.C.S.

To-day I will speak of the common diseases of the breast. Some of them you may see here in the wards of the hospital, and others you will have opportunities of seeing, I have no doubt, in the out-patient departments, and you may also meet with them in private practice. First, let me say a word with regard to atrophy of the breast. You will, of course, find different individuals with their breasts differently developed; for in some families there is hardly any development of the mammary region, while in others you find that all the girls are full-breasted. The practical surgical point is whether or not the breast is sufficiently developed, particularly the nipple, for the duties of maternity. That is where the atrophy of the breast, if we may so call it, becomes important in practice. If you are retained to attend a woman in her first confinement, it is quite worth while to take a little trouble before she is confined to see that she is able to nurse the child which will be born. Many women have very sessile nipples; and you must remember that the nipple is not merely a series of

ducts for the passage of the milk, but that there is a large quantity of involuntary muscular fibre in it, and it is because of that involuntary muscular fibre that the nipple, when it is excited, becomes more prominent, thus enabling the child's mouth to retain it. You may notice that when a child is first put to the breast it will not be able to grasp the nipple, but, by poking its nose and mouth against it, it excites the nipple, so that it becomes more prominent, and then the child can hold it.

It is quite worth while to draw out the nipple, if it is too sessile for the child to get at it, by an ordinary breast-pump. The old-fashioned breast-pump, I suppose, has quite gone out of use. The more modern instrument is one with which a woman can draw the breast herself, and may be seen in all the chemists' shops. It consists of a little glass shield, with a mouth-piece coming off from it, at which the woman can suck, so making a vacuum; and the milk then comes away and collects in the lower part. But a little friction also may do good in developing the nipple—a little gentle rubbing, too, will harden the skin, and that is an important matter. But let me say that if friction is carried to an abnormal extent, it may produce hypertrophy of the breast, which is a serious thing, leading to amputation.

You will find that the monthly nurse, if she is a good one, will take a little trouble to bathe the nipple of a primipara with a little brandy and water, which is a common recipe and a very good one; but one great reason why nipples become sore is that they are so constantly wet. You may not be aware that many women suffer from an involuntary flow of milk from the breast, so that their clothes are apt to get wet, and I have here a little contrivance to be used in cases of that kind. It is a little glass into which the nipple can be slipped, and it can be worn under the dress. The milk which is superfluous accumulates in the lower part of the glass, and does not wet the breast. It is a great point that the nipple should be dry, and that it should be protected when it is not being used; otherwise it is apt to become what is called "chapped." Now a chapped nipple is the beginning of a series of troubles, and it should therefore be cured as soon as possible. I have asked in the midwifery department of the hospital what is now the favorite remedy for chapped and sore nipples, and I am told that it is glycerine of tannin and sulphurous acid, of each a half ounce with one ounce of water. You have here the astringent effect of tannin and sulphuric acid and I have no doubt that it is a good remedy. There are fifty remedies for chapped and sore nipples; and perhaps one of the best surgical ones is nitrate of silver, if properly applied. The great mistake made in the application of nitrate of silver for a sore breast is taking a stick and rubbing it on promiscuously; you ther

have a great patch of caustic, and you may have a large sore on the nipple. The proper way is to take a fine camel-hair brush and wet it with a ten-grain solution, or draw the brush over the stick of nitrate of silver, and having thoroughly dried the nipple, to paint into any little crack that you can see. Some sore nipples evidently depend upon the condition of the child's mouth. A child with an aphthous mouth is apt to produce a sore condition of the nipple. It is difficult to treat, and no doubt it may be communicated from one child to another; for if a healthy child is put to a nipple of that kind, it may possibly get thrush. Borax is the great remedy for the complaint—the old-fashioned borax and honey, or the more modern glycerinum boracis, applied freely to the child's mouth, and also to the nipple of the mother.

These are comparatively simple cases; the complicated and important one is when syphilis is present in the child's mouth. When you get into practice you cannot be too much on your guard about syphilis; that is to say, you must keep your eyes open but your mouth shut. If you bear it in mind, you will avoid the errors into which practitioners are sometimes led, both as regards the mother and as regards the wet-nurse which is an important point. A woman, we will say, has borne a healthy child, and she is unable to nurse it. A wet nurse is engaged and you find some time afterwards that the child develops a coppery rash upon the body, with all the symptoms of constitutional syphilis, and it becomes clear that the child has been syphilized by the nurse. Such cases have occurred from time to time, and they are extremely serious. It is very important that in selecting a wet-nurse you should go thoroughly into the history of her previous life, and inquire whether she has suffered in any way from sores about the genitals, or whether she has had secondary, or, possibly tertiary symptoms. Generally the wet-nurse is young, and will not be likely to have got so far as tertiary symptoms; but it is not uncommon for a young woman to have unconsciously secondary syphilis from a husband, or in other ways, because wet-nurses are not always married. You find perhaps that there is some evidence of syphilis in the throat, and she may communicate this to the child she suckles by kissing it. I do not think there is any proof that syphilis can be communicated through the milk, but what more often happens is that the woman's nipple becomes a little sore, then you get the child's mouth infected, and all the symptoms of constitutional syphilis develop, and it has sometimes happened in such cases that the syphilized child has been put to the nipple of a healthy woman, and has again communicated syphilis. You cannot be too particular in the choice of a wet-nurse, and you should be most particular in looking at the child that you give to the wet nurse.

If you have delivered a woman who is unable to nurse her child, and who is the subject of syphilis, the child will undoubtedly within a month or six weeks after birth develop congenital syphilis; and if you have already put the child to a wet-nurse, the chances are that it will communicate syphilis to her, and then trouble may arise—an action may be brought, or remuneration would have to be made. I draw your attention to these things because mistakes are sometimes made simply through inattention to them.

Now, supposing a patient has a simple ordinary sore nipple, what bad results may result from it? The first thing is that the unfortunate woman with a sore nipple is almost unable to nurse her child. The nipple is so exquisitely tender that when the child is put to it, the woman, whether the mother or not, cannot bear the pain. Under those circumstances, of course you have to do something, and the best thing you can do is to provide an artificial nipple. A glass shield like that which I hold in my hand is the usual thing. Upon it there should be fitted an ordinary india-rubber teat, and if that is placed over the nipple and the nipple is made to go well into it, with a little suction by the child's mouth the milk flows, and there is no irritation of the nipple. You can then proceed with the medication of the nipple, without doing harm to the child. But it often happens that the woman neglects herself. She has got a sore nipple, she cannot nurse the child, and she allows her breast to become gorged with milk, which is the first stage of inflammation of the breast. You will sometimes have a woman come to you with a breast as full of milk as the unfortunate overstocked cows that are sometimes driven to the fair, not having been milked for twenty-four hours before selling, in order to show the purchaser that they have good udders of milk. The woman suffers in the same way as the lower animal; the distension of the breast is extreme, and there is great weight and distress, and if it is not shortly relieved, it soon ends in inflammation. The mode of relieving it is a simple matter. The milk may either be drawn with a pump, or the breast may be relieved very much by gentle pressure of the hands, the operator standing behind the patient and compressing the breast, so that the milk is squeezed out without difficulty. I say gentle pressure, because if you use anything like violent pressure, you may do a great deal of harm. In the case of new-born children, one sometimes sees a foolish old monthly nurse, who observes a little fluid coming away from the breast of a child (which is not at all uncommon), set to work vigorously to squeeze it out, and every now and then you get in such cases an abscess in the breast of a new-born child. If, as I have said, the woman's breast is gently squeezed, the milk exudes, and the trouble may pass off. If it is necessary to

stop the milk in the breast—if, for instance, the child has died, or has been taken away from the mother, and the breast simply becomes overloaded, then there is nothing so good as the application of belladonna. At the present time in this hospital, and, I think, a good deal through my efforts and teaching, we use belladonna for most local inflammatory ailments; but originally the use of belladonna was introduced for breasts in which we wanted to arrest the secretion of milk. There is no doubt that the application of belladonna mixed with glycerine is the very best remedy that you can have for that kind of case. Well and thoroughly applied over the breast, it tends to arrest the secretion of milk, relieves pain, and prevents the occurrence of inflammation. Then suppose we have the breast not properly emptied, it having gone beyond that stage before you see it, you certainly will have inflammation set up in the breast—general mastitis, if you like to use the word. There are two theories with regard to that inflammation. I believe myself that in the great majority of cases it begins, as I have described, in distension of the milk ducts; but some authorities believe that the inflammation travels up the ducts from the sore nipple, and they say that the nipple is the direct cause of the inflammation. Be that as it may, you find all the symptoms of inflammation, namely, swelling, heat, and redness, and the great thing, of course, it to relieve it as soon as possible.

If there is one thing that a woman who has a sore breast objects to more than another, it is to have it, as she calls it, "lanced." If you say to a patient that you are going to lance her abscess, she will probably button up her dress and disappear, and you will not see her again. When I used to see the out-patients I generally got over the difficulty in cases of this sort by avoiding the word "lancing," and by making no open show of knives and basins. If you open your lancet behind your back or in your pocket, and then just make a puncture, which is really all that is required, you can let out the abscess without any great difficulty, and your patient will be only too grateful for what you have done. Of course, if you are going to open an extensive abscess, it is wiser to give the patient chloroform; but if you have not the opportunity of giving chloroform, you must act artfully and open the abscess quite sufficiently without giving the patient any pain; the puncture is so momentary, and the relief of tension of the abscess is so great that the operation is really painless.

With regard to the opening of an abscess of the breast, in what direction should you open it? No doubt the best plan is to open in the direction of the ducts as far as possible. Of course, you know that from the nipple in the middle there are straight ducts, as they are called, radiating, and

then the lobuli of the breast are arranged all round, so that in making the incision anywhere near the nipple you should always make it in a line radiating from the nipple, and you should make it, as far as possible, in a dependent position. Of course, if the abscess happens to be in the upper part of the breast, an incision should be made immediately above the nipple, which is as good a position as you can have; but if the abscess is in the lower part of the breast, clearly you must make it lower down. You must make a dependent opening wherever it is, and you must remember the anatomy of the gland so as not to cut the essential parts of the breast across more than you can help. In the wards, from time to time, we see cases of abscesses of the breast, and they are invariably the neglected ones, for we do not ordinarily take in cases of common abscess of the breast. Mr. Holden has given me the notes of three cases which we have had in the wards this year. I will not trouble you with the details of two of them, which are very common cases, but will pass on to that of a woman named E. B., which I will give a little in detail.

She was aged 21, and was admitted on June 27. She was confined with her first child (these abscesses generally occur with the first child) on May 30, 1888. She tried to suckle the child for two days, but had not enough milk. On June 15 she had great pain in the right breast, and during the night the breast swelled to a great size. On June 16 the breast was poulticed till the pain ceased. The left breast swelled in a similar way, and it was poulticed. On June 17 the right breast began to discharge about the lower border, and very soon a number of discharging points formed, and a large amount of pus flowed during the following week. Within a few days the left breast began to discharge, but it was never so bad as the right one. On June 26 the right breast ulcerated right through above the nipple. The lower part of the breast being thus detached fell downwards by its own weight, disclosing a large abscess-cavity between the breast and the pectoral muscle.

On admission the right breast was pretty well converted into a large abscess. At the top, two inches above the nipple, many discharging points joined together, forming a large, irregular, ragged wound of a linear character, chiefly transverse. The result was the falling of the breast in a flap downward, exposing the whole cavity of the abscess. Those who saw the case can hardly forget it; the condition was so remarkable on account of the enormous destruction of tissue, and the large abscess, which was very widely open. The abscess was submammary, the floor being formed by the pectoralis major, the falling flap containing the whole thickness of the breast, and, except for a questionable portion below, its whole substance.

This is an exaggerated example of the bad

effects of over-poulticing. I do not know whether the woman had medical advice or not, but she seems to have been advised to poultice, and that is just what is done domestically; they go on poulticing until they reduce the vitality of the part, and the whole of the tissues have become undermined by suppuration, and then at last the patient has to come into the hospital. Let me remind you of what was done before I show you the patient. The great point at first was to support the breast, and you may remember I insisted upon its being properly supported by plaster. It is of no use bandaging in these cases, but with long strips of plaster properly applied you can make the pressure sufficient to bring the parts into position.

You now see from the appearance of the patient before you that the description Mr. Holden has given is perfectly correct. There is a great transverse cut running across the breast, and the whole breast fell down. On the other side you see there are scars of a less severe suppuration, a part of the breast was a good deal undermined, but it was nothing compared with the right side.

As regards the treatment of these mammary abscesses, in the first place let me say that I do not decry poultices. You must have heard me say in the wards that I have not lost my faith in the old-fashioned linseed poultice, and I believe it to be an extremely comfortable thing if properly applied and if the breast is properly supported. The great mistake is keeping it on too long. A bad breast should be held up either with a silk handkerchief or a bandage. If it is kept up and well supported, I have no objection to poulticing for a few hours, but as soon as there is any matter present it ought to be let out. That is the difficulty—that the matter is not always at the surface—and the surgeon hesitates because his finger is not sufficiently educated to be sure whether there is any matter or not, and he allows it to burrow; whereas if he were more up to his work he would have made a timely incision, and saved all the trouble. For myself I would much rather make an incision uselessly in a case of that kind before the matter is formed than I would allow the matter to burrow, even twelve hours after it was formed. You do no harm by an early incision, for if nothing escapes you withdraw the knife, and the puncture soon heals; but if you find the matter deeper than you expect, and it wells up beside the bistoury, you have only to enlarge the opening, and the matter flows out.

If the case comes before you after the matter has burrowed, a great deal can be done by the modern system of putting in drainage-tubes, which in these cases are extremely useful. You put in a properly arranged drainage-tube, so that the opening shall be dependent, and the matter finds its way out, and you relieve the patient materially.

Here, again, let me warn you against putting in too many drainage-tubes and keeping them in too long. There is sometimes a tendency, when a drainage-tube is put in, to leave it in indefinitely, whereas it does all the good it is likely to do in two or three days. You will notice how soon we remove drainage-tubes here in cases of amputation and the like. It is of no use to leave them in a long time; in fact, they become practically setons.

Then let me give you another caution. Be careful that you do not lose your drainage-tube. I have more than once seen cases in which a breast has been drained, I have no doubt very properly, but unfortunately the surgeon has lost a piece of the drainage-tube. Months afterwards the patient in such a case comes back, and there is a great hub-bub because the piece of drainage-tube has come out of a sinus, and naturally the patient appreciates the fact that the trouble has been kept up by the tube. You should, therefore, have strings to your drainage-tube, or you may adopt the plan you have seen me use of putting a safety-pin through the end of it, which, I think is better, because it always keeps the end of the tube flush with the skin.

So much for the ordinary form of abscess. Let me remind you that you may have mammary abscesses in different situations. There are three common situations in which an abscess may form. First, you may have it in these straight tubes round the nipple. One of these little tubes is blocked by epithelium; the tube then becomes distended with milk. If you see it, you may open it, and call it a little lacteal tumor if you like; but if it is not seen and treated, it is apt to suppurate, and then you get a little elongated abscess close to the nipple. The treatment is quite obvious and simple, and you merely incise it. A more serious case is the one I have described—an abscess in the substance of the breast. Then, lastly, there is the form which you meet with occasionally, but not commonly—an abscess under the breast. In the case the notes of which I have read to you, by the time the patient was admitted the abscess had got under the breast, but I do not think it was so originally. But there are cases in which the cellular tissue between the breast and the pectoral muscle becomes inflamed and the abscess forms there, and you have the remarkable feature of the breast being thrust forward by a swelling behind it; and the fluctuation, instead of being through the breast is at the margin of it, and usually the lower margin. In these cases, of course, you would make a free incision below the breast and let the matter out. It runs out readily, and afterwards, by judicious pressure, you bring the breast back again into its original position, and it soon gets a firm attachment. Those are comparatively simple cases if they are recognized, but I have known an abscess of that kind to be taken for a much more

serious disease. The patient was thought to have a rapidly-growing tumor of the breast, which, after a time, resolved itself into a small abscess over the pectoral muscle.

Let me say a word with regard to a simple matter, but one which is sometimes misunderstood, from the want of having seen it. There is a disease of the skin which we know as molluscum contagiosum, which is found upon children's faces, and which you may sometimes find upon a woman's breast. It is a little collection of sebaceous material, and if examined microscopically will be found to consist of cells packed together in lobular masses, bounded and separated by fibrous tissue. Some authorities do not agree as to its being contagious, but I have no doubt it is contagious in this sense, that if a child happens to have it on its face—a common situation—you will find that the mother's breast will become inoculated, and there will be a development of molluscum contagiosum upon it. I have here a picture of it. You see the sebaceous material collected in the follicles of the child's face, and there is exactly a similar disease produced upon the mother's breast. I am not sure that it can be communicated from the mother to the child, but I am sure that it can be communicated from the child to the mother. It is not a serious thing, but you ought to be able to recognize it. The treatment is to squeeze out the little sebaceous collections, which heal up readily enough, as the ordinary comedones do on the face. Then there is another thing which is occasionally found on the skin of the breast—that is keloid. It is not common, and I mention it for that reason. You may meet with a patient who has developed keloid on the skin of the breast, which is very apt to be mistaken for a more serious disease. At first it is hard, and looks a little like scirrhus. I simply mention it that you may have your attention called to it.—*Br. Med. Jour.*

THE TREATMENT OF NEURALGIA.

PROPHYLACTIC TREATMENT.

Idiopathic neuralgia, like the other neuroses' is a hereditary disease. The ascendants of the neuralgic subject—one or more of them—were either neuralgic, or were sufferers from hysteria, epilepsy, or some other neurosis; or, the parent may have impaired a naturally good constitution by intemperance or some other vice, and so entailed on the offspring that instability of nerve organization, which under suitable provocation, finds expression in some form of neuralgia.

There are, of course, exceptions to the rule that neuralgia is a hereditary disease; children born healthy have had their constitutions undermined by insufficient diet, by some one or more of the

diseases peculiar to children (as scarlet fever or diphtheria,) or even by precocious addiction to some vice, etc.

Children who have inherited the neuralgic temperament should not be allowed to study too hard at school, and should not be subjected to physical tasks of an arduous and exhausting nature. Moderation in all things should be the rule. Such subjects are unfitted to bear a strain. At the same time they should be required to walk in the open air, to indulge in invigorating sports, to perform gymnastic exercises of certain kinds which can be borne without too much fatigue, to practise rowing, horse-back riding, swimming. The cold bath or cold douche in the morning is a good auxiliary. All these hygienic measures improve the circulation and develop a strong muscular and nervous organization. Hydrotherapy especially toughens the integument and prevents the frequent occurrence of debilitating rheums.

To these means should be added a full, generous diet of meat, eggs, fish, milk, cereals, vegetables and fruits. Very many cases of neuralgia have been traced to a meagre and insufficient dietary. When we remember that neuralgia is essentially a disease of malnutrition, and that nerve substance is a conglomerate of richest animalized principles (phosphorized oleo-albumen), we see that we must place in the foremost rank of remedial agencies those means which improve or restore the nutritive functions.

Some of the worst forms of migraine, prosopalgia, etc., that I have ever seen were among the poor and ill-fed. For delicate half-starved children brought up in slums and tenement houses there can be but little hope; out of these breeding-places of disease come multitudes of the hysterical, the neuralgic, the nervously shattered, who float about between the hospital and the almshouse.

The neuropathic child should be taught the necessity of plenty of sleep. Too much emphasis cannot be placed on this requirement. Eight, even ten hours sleep a day is not too much. Those predisposed to neuralgia should be compelled to go to bed early—between the hours of nine and ten every night, and all evening excitements should be forbidden. Among the latter should be mentioned the reading of dime novels.

As everything that favors the precocious development of the passions is bad, the evil influence of corrupt companions is to be depreciated and avoided by every possible means. It is, however, a matter of great difficulty for the parent or guardian always to avert such influences, for the cousin or class-mate of the moral and "goody," sort is often the one who in secret instils the poison and corrupts the nature of the child.

Doubtless the evils of masturbation, as practised by children, have not been too highly painted. The neuropathic child cannot be too early, too earnestly

or too faithfully warned against the pernicious effects of this vice.

PROPHYLAXIS IN THE ADULT.

The adult, who, by faulty organization, by debilitating influences, by previous attacks of neuralgia, is predisposed to this neurosis, demands essentially the prophylactic hygiene as has been above outlined. He should possess some light, healthy employment, and avoid occupations that involve arduous toil and great anxiety. Good, nutritious food at regular seasons should be eaten, and alcoholic and other stimulants eschewed; the neuralgic should also religiously refrain from smoking. These patients are prone to seek excitement, and often suffer a breakdown in consequence. One patient with whom I was acquainted, used invariably to experience a return of her megrim after going to an evening party or a ball. Such persons are uncommonly vivacious under excitement, and endure well the strain for the time being. They are, however, capable of using up in one evening's dissipation all their reserve force, and bringing their nerve-centres into a state of unnatural erethism that weeks of rest may not calm.

The condition of these sufferers is often deplorable. Of fine literary and æsthetic tastes, they cannot long enjoy reading, artistic pursuits, etc., without paying the penalty in an attack of severe orbital or supra-orbital neuralgia. One of my acquaintances cannot read an hour consecutively without twinges of pain through his temples, which oblige him to desist. He regards himself as shut out from the best enjoyments of life; is gloomy and suicidal. Persons of this temperament need an especially fortifying regimen; of which life on the sea (yachting), in the woods, among the mountains, with absolute freedom from brain work, shall form the principal part.

Some writers (as Vanlier and Anstie), have found excessive religiousness a factor in the genesis of neuralgia; but doubtless an ardent espousal of the most gloomy theological beliefs is less harmful than the indulgence of depressing vices, or the cultivation of voluptuous appetites.

The same remarks that have been made about sleep, are applicable to the adult neurotic, who should have regular habits of sleep, and whose sleep should be long and sound. If he happens to be a poor sleeper, he should endeavor to woo tired nature's sweet restorer, by taking much exercise in the open air, and especially diverting exercises, by cold bathing in the morning, and the warm bath just before going to bed, with vigorous shampooing of the body, along with the sipping of a cup of hot water containing some mild cordial, as spirits of lavender, or even a little Cibil's Fluid Beef; this is far better than resorting to any of the ordinary hypnotics, as chloral and sulphonal, which are sure, in the end, to leave the nervous tonus

damaged. It is only exceptionally that I would allow a neuropathic patient to apply to any of the so-called hypnotics for relief. Where a small dose of whiskey, or a glass of bitter ale will produce refreshing sleep, this is safer than chloral or a narcotic. Sometimes it makes a great difference what the victim of insomnia eats for her supper, and there are all sorts of idiosyncrasies in regard to this. Some persons will sleep better with a full, some with an empty stomach. To some patients your best prescription is a supper of hominy and milk; to others, a light lunch, or cup of beef tea on going to bed.

Above all things, the neuralgic invalid should have a mind at ease, for anxiety, care, worry, overmastering passions, are the greatest foes to healthful sleep.

As adjuvants to a cure, there are certain tonic medicines which deserve mention here: quinine, strychnine, iron, arsenic, and a very moderate amount of some of the fermented liquors, wine and beer. To the anæmic, iron and arsenic are especially useful; a good combination is the *iron, arsenic and strychnine pill*, furnished by a number of our pharmacists.

Fothergill's pill is a good stomachic tonic. Its formula is as follows:

R.—Acid. arseniosi gr. j.
 Ferri. sulph. exsic. ʒ ss.
 Pulv. capsici ʒ j.
 Pil. aloes et myrrh q. s.

M.—Ft. pil. No. LX.

Sig.—One pill three times a day.

Or five minims of Fowler's solution may be associated with ten grains of bicarbonate of sodium and five of potassio-tartrate of iron in a fluid ounce of infusion quassia, this dose to be given after each meal.

Arsenic is one of the best anti-neuralgic remedies that we possess. According to Anstie, it is especially useful in the visceral neuralgias. With arsenic, cod-liver oil may often be conjoined to advantage. More satisfactory results will be obtained from the pure oil, when it can be borne, than from any of the emulsions, all of which, according to my experience, patients soon tire. Too much care cannot be taken that the oil shall be perfectly sweet and fresh.

A course of electric treatment (galvanism preferably to faradism), sometimes works well; both by calming the erethism of the nerve centres, and promoting the nutrition of the latter. The electrical treatment of neuralgia will claim especial consideration in another article.

Treatment of Diatheses which lead to Neuralgia.—Neuralgia is sometimes under the dominance of a diathesis such as gout, chlorosis, rheumatism, hysteria, diabetes. The treatment which is devoted to the diathesis is the proper treatment of the neuralgia.

Neuralgia of Toxic Origin.—Neuralgia may be dependent on a poison in the blood; lead, mercury, arsenic, alcohol, malaria. Here the leading indications are: 1, to suppress, then antidote, then promote elimination of the poison; 2, as far as possible to protect the organism from the effects of the toxic agent, and palliate symptoms as they may arise. It is evident that when the proper antidote can be administered, this is the remedy *par excellence* for the neuralgia. In malarial neuralgia, for instance, quinine in large doses is indicated. In alcoholic neuralgia suppression of all alcoholic stimulants should be strictly enjoined. In nicotinic neuralgia tobacco should be abstained from. In colica pictonum, the proper treatment of lead poisoning will also cure the neuralgia.

Reflex Neuralgias.—These neuralgias are due to a localized morbid state (of the uterus, kidneys, etc.), and the successful treatment of the suffering organ will cure the neuralgia.

Surgical means of cure.—Neurectomy, neurectomy and nerve stretching have all been practised for the cure of intractable neuralgia. Nerve stretching will be considered with sciatica, and neurectomy, (which has given some brilliant results) under the head of prosopalgia.

Treatment of Neuralgic Paryoxysms.—When in the presence of an attack of neuralgia, the first thing, of course, to do is to relieve the pain. It is desirable, if possible, to obtain analgesia without resorting to morphine. In many of the neuralgias, such as migraine and those of central origin, whether idiopathic or symptomatic, antipyrin often gives speedy, marked relief, fifteen grains being followed by complete disappearance of the pain. A repetition of the same dose in six hours, and a continuance of this treatment for several days, the antipyrin being given often enough to keep the pain under subjection, may be all that is required, the patient being as far as possible removed from the reach of causal influences. This is Germain Sée's treatment of the headaches of students, headaches which often oblige matriculates to suspend study for weeks or months. Acetanilid in half the dose of antipyrin may be attended with an equally good result, and the same may be said of phenacetine. Lately exalgine has come into favor in some quarters; it has been praised as an anti-neuralgic by Dujardin-Beaumez and Bardet.

It is probable that where antipyrin fails none of these other medicines will succeed.

In my own practice I have seen good results from acetanilid in neuralgic headaches. In cervico-brachial, dorso-lumbar and sciatic neuralgia I have seen no benefit from any of these members of the "aromatic series." Citrate of caffeine and guarana are remedies from which much good may be expected in hemicrania, and always where the

pain seems to be the consequence of nerve tire. The dose of caffeine is three or four grains, of guarana twenty grains.

The following prescription for which I am indebted to the late Dr. George M. Beard has given good results in headaches of almost all kinds:

R.—Cit caffeine.
 Carb. ammon. āā ℥j.
 Elixir. guaranæ fʒj.

M.—Dose, a teaspoonful every hour till the pain is relieved.

Some of my patients, delicate migrainous patients, keep a bottle of citrate of caffeine constantly on their toilet tables; a frequent resort to it keeps them free from headaches. I have never seen any harm result from the continuous use of this drug.

Aconitine in pills of $\frac{1}{100}$ grain, one pill every five hours till the supervention of the physiological effects, or till the pain disappears, sometimes has a charming effect in migraine and tic douloureux.

In face ache, especially when due to a decayed tooth, the tincture of gelsemium in five-drop doses every two hours is often followed by speedy subsidence of the pain. I have always found gelsemium in this dose to be a perfectly safe remedy.

Some practitioners have great faith in a full dose of quinine (fifteen grains) in neuralgias of the peripheral nerves, whether due to malaria or some other cause. I cannot say that I have ever found this alkaloid beneficial in neuralgic paroxysms, except where the attack was clearly of malarial origin. "Gross" neuralgic pills, in which quinine is combined with aconite, strychnine and morphine are, I think, chiefly of use as a prophylactic where attacks have been frequent.

As outward applications chloroform liniment, veratrine ointment, extract of belladonna rubbed up to a paste with water, spread on cloth and applied over the seat of pain, have had their advocates. No external means can be relied on. Anodyne embrocations are more useful when the pain is rheumatic than when it is neuralgic.

Hypnotizers claim to have accomplished wonderful results by putting the neuralgic sufferer into the hypnotic sleep, and assuring him that the pain no longer exists. As nothing is impossible *a priori*, and all things are to be believed on sufficient testimony, we have now adequate warrant for a certain faith in hypnotism as a means of cure. Bernheim's Book on "Suggestion as a Therapeutic Agency" contains a number of instances of severe neuralgic and neuralgiform pains cured by hypnotic suggestions.

It will often happen that none of the above means are applicable to the case in hand, or, if tried, they have resulted in failure. There is nothing to do then, but to resort to a hypodermic injection of morphine. The tablet triturates of

the pharmacists are very handy for this purpose. The commencing dose should be the sixth of a grain. If no relief is obtained, the injection may be repeated in fifteen minutes or half an hour. In bad cases of tic douloureux migraine visceralgia, I have often had to repeat these injections every half hour until a grain, a grain and a half, and even two grains have been administered. Some pain creates great tolerance of morphine. I have seen a delicate neurotic girl in a paroxysm of cervico-bronchial neuralgia bear with impunity a quantity of morphine introduced subcutaneously that would have killed a strong, well man. There is not the same tolerance of atropine, and it will not do to push the injections of this alkaloid. If for the first injection one of the morphine and atropine tablets be used, in the subsequent injections the atropine should be omitted. The dryness of the mouth and throat that follows a full dose of atropine gives the patient great annoyance and discomfort.

For ordinary hypodermic use I employ a solution of morphine, consisting of four grains of sulphate of morphine to a fluid ounce of cherry laurel water. Of this, a hypodermic syringe may be injected with safety in an adult. The cherry laurel water keeps the solution from spoiling.

Inject into a fleshy part of the arm; there is no advantage in injecting over the seat of the pain.

Deep injections of chloroform sometimes as effectually relieve the pain as morphine injections. For sciatica take up a syringe of pure chloroform and inject it the depth of the syringe-needle into the gluteal muscles.

Antipyrin may also be used hypodermically. Dissolve eight grains in a hypodermic syringe of warm water and inject the whole into a fleshy part of the arm or thigh. Germain Séé highly commends this use of antipyrin.—Dr. E. P. Hurd, in *Times and Register*.

MEDICAL NOTES.

In a case of *traumatic priapism*, Prof. Brinton ordered rest in bed and twenty grains of bromide of potash four times a day.

In cases of *coccygodynia*, hypodermic injections of warm water will give relief.—Prof. Parvin.

As a vaginal wash in *vaginitis*—

R—Creolin, ʒ j.
Aque, f ʒ xvj.

—Prof. Parvin.

Prof. Brinton is very specific in directing that a *fracture of the radius and ulna* be dressed with the hand midway between supination and pronation, and without a primary roller.

For a man of forty-six, with *bronchial neuralgia*—

R—Atropinæ sulph., gr. ʒʒʒ.
Morphinæ sulph., gr. ʒʒʒ.—M.

Sig.—Hypodermatically once a day.

Also small blisters over points of redness.—Prof. DaCosta.

In cases of *sterility* in women, resulting from excessive acid secretion, Prof. Parvin recommends—

R—Sodii bicarb., gr. xij.
Glycerini, ʒ j.
Aque destillat., f ʒ iv.—M.

Sig.—Use as vaginal injection just before copulation.

For a woman of forty, with *aortic constriction* and moderate *hypertrophy of heart*—

R—Barii chlorid., gr. ʒʒʒ.
Aque destillat., f ʒ j.—M.

Sig.—Three times a day.

Also Tinct. belladonnæ, gtt. v. every night.—Prof. DaCosta.

Prof. Brinton brought before the class a man of about thirty years of age, with a very tight *stricture of the urethra*. He passed through the stricture a filiform bougie, allowing this to remain four days, to produce absorption, then threading over the filiform bougie a silver catheter and passing it into the bladder; then rapid dilatation by dilator and bougies.

For a woman of twenty, with *aortic regurgitation* and *hypertrophy of heart*—

R—Tinct. aconiti, gtt. ij.
Tinct. belladonnæ, gtt. iij.
Aque, f ʒ j.—M.

Sig.—Morning and evening.—Prof. DaCosta.

Prof. DaCosta brought before the clinic a woman with *goitre*, and prescribed—

R—Iodinii, gr. xxx.
Lanolin, ʒ j.
Ol. juniperi, gtt. v.—M.
Fiant unguentum.

Sig.—Apply over the goitre. Also three drops of Churchill's tincture of iodine, well diluted, to be taken three times a day, and to be increased to ten drops three times a day.

A man twenty-seven years old, suffering with *chronic gastritis*, was brought before the class by Prof. DaCosta, and treated as follows:—Diet of meat; milk, with ten drops of aromatic spirits of ammonia in each glassful; no starchy food; also—

R—Thymol, gr. ʒʒʒ.
Tinct. gentianæ comp., ℥ xl.
Elixir aurantii, ℥ xx.—M.

Sig.—Two hours after each meal.

Prof. Brinton treated a case of *internal hæmorrhoids* by pulling them down, after stretching the

anus with the thumbs, making incision around base of each pile to divide the nerves, then passing a needle armed with a double ligature through the base of the pile and ligaturing each half tightly in the incision made to divide the nerves. One end of the ligature was left hanging out, so that the piles could be readily brought in sight should secondary bleeding occur.

As a general rule applicable to cases of *retention of urine*, where retention has existed over twenty hours, do not withdraw the whole contents at once; withdraw one-half at once, and return in half an hour or an hour and evacuate the balance. Sudden withdrawal may give rise to one of three conditions, viz., cystitis, paralysis, or hæmorrhage from the organ.—Prof. Gross.

For *incomplete abortion*, Prof. Parvin recommends the following treatment: Dilate the cervix by means of Hegar's hard rubber dilators; extract the remains of the uterine contents by Emmet's curette forceps, cleansing them each time of removal by dipping in a carbolic acid solution (weak). After all material is removed, swab out the entire inner uterine surface with tinct. iodine (Churchill's), by means of cotton wrapped over an applicator.—*Coll. and Clin. Rec.*

AMPUTATION AT THE HIP-JOINT.

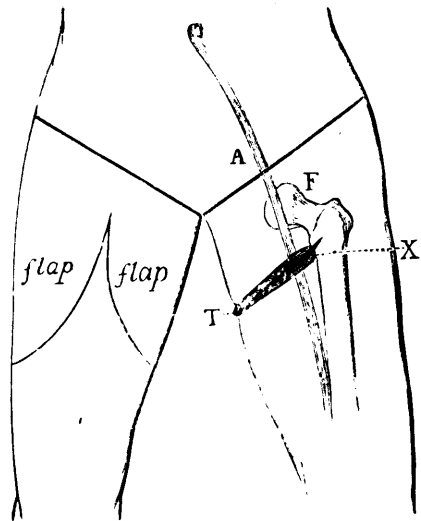
I have recently been practising on the dead body a new operation for amputation at the hip-joint, though I have not yet had an opportunity of trying it on the living.

The dangers of this operation are three—shock, hæmorrhage, and infection of the wound from its proximity to the anus. The first-named will exist probably in spite of every improvement; the two latter I think are obviated by this new method of operating, which I will now briefly describe.

The femoral artery is carefully felt for below Poupart's ligament; one inch below Poupart's ligament and half an inch outside the artery a stout nickel or steel skewer is thrust straight through from before backwards, and emerges on the posterior aspect a little above the gluteal fold. This skewer passes just inside the neck of the bone in the angle between neck and shaft of femur. A piece of India-rubber like that used in boy's catapult is passed on the inside of the thigh, and twisted in a figure of 8 over the projecting ends of the skewer. It can be tied or, preferably, clamped with a bit of soft metal. By this means the femoral artery is completely controlled above the origin of the profunda. A long straight transfexion knife is now passed in the same direction as the skewer, but entering the skin at a slightly lower level, and emerging at a slightly lower level behind. A straight vertical incision, about two-

inches long, is now made with the knife, which is finally carried inwards, making a tapering flap from the tissues on the inner side of the limb.

During this part of the operation very little hæmorrhage is likely to occur, as the femoral in front and the sciatic artery behind are compressed by the elastic band. The limb is now forcibly abducted, and the capsule, stretched over the protruding head comes into view, a nick with the knife allows the head to escape, and the blade is now carried first above and then outside the great trochanter, keeping close to the bone; and, finally, a second flap, similar to the first, is cut from the tissues on the outside of the limb.



A, artery; F, femur; X, space between bone and artery in'o which pin is thrust from before backwards; T, elastic or india-rubber band passed around limb and ends of pin on inner side.

This operation can, of course, be modified by tying the femoral and other visible vessels after the first incision; or, when the head is freed, a second pin, an elastic ligature, may be made to encircle the outer flap before it is completely divided. The accompanying rough diagram explains the method. The advantages of this are:—(1) extreme rapidity; (2) complete control of hæmorrhage; (3) the wound is vertical, therefore allows for drainage; cleanly cut, therefore ensures apposition and prompt union; away from the anus, and, therefore, not liable to infection. I trust that other surgeons will at least try the method, which, I believe, will be found most satisfactory.—Thomas Moyles, F. R. C. S. I., in *Br. Med. Jour.*

TREATMENT OF OBESITY.—Frequently the practising physician is called upon to treat obesity in women where this morbid condition constitutes a most tiresome infirmity, and is often a complication of most of the affections of the feminine sex. We advise a faithful trial of the method of

Schwenninger and Oertel, which has given so many excellent results in Germany. The following are the indications which have been laid down by these savants :

1. Elevate the tone of the muscular force of the heart.
2. Maintain the normal composition of the blood.
3. Regulate the quantity of liquid in the economy.
4. Prevent the deposit of fat.

The above indications are observed by the following methods :

1. The cardiac muscle is increased in tone by the augmentation of physical exercise—for example, by ascending elevations. It is necessary to progress with caution ; the exercise will be gradual and the amount of work proportionate to the resistance of the subject.

2. To maintain the normal composition of the blood it is necessary that the alimentation should be principally albuminous ; it will consist of the lean of beef, roast or boiled, veal, mutton, game and eggs.

We can add green vegetables, such as cabbage and spinach, but fat and hydrocarbons shall be given only in small doses—for example, the amount of bread should not exceed 120 to 180 grammes a day.

3. We should limit each day the quantity of drink—180 grammes coffee, of tea, or milk ; 360 grammes of wine ; 240 to 480 grammes of water will complete the amount of liquid absorbed in the twenty-four hours. Beer is entirely forbidden. Then, again, transpiration is excited by energetic exercise as well as by baths and coverings.

4. Lastly, the deposit of fat is attacked by the practice of the above-mentioned principles of dietetics.

This, for example, is how we should proceed :

Morning.—The cup of tea or coffee, with a little milk, will represent a total of about 180 grammes, and about 90 grammes of bread.

Noon.—From 80 to 100 grammes of soup, 210 to 240 grammes of beef, roast or boiled, veal, game, salad or vegetable, a little fish if desired, but cooked without fat, 30 grammes of bread or farinaceous pudding (never more than 90 grammes), 90 to 180 grammes of fruit in season, for dessert. It is preferable not to drink at the repast, but in hot weather we can allow from 180 to 240 grammes of a light wine.

Afternoon.—The same quantity of tea or coffee as in the morning, with, as a maximum, 180 grammes of water and 30 grammes of bread as an exceptional concession.

Evening.—One or two boiled eggs, 30 grammes of bread, perhaps a little slice of cheese, salad, and fruits ; 180 to 240 grammes of wine, with 120 to 150 grammes of water.—*Rev. de Therap.*

PHOSPHORUS IN THE TREATMENT OF RICKETS.—

The use of phosphorus in rickets, so much vaunted by Kassowitz and others a couple of years ago, has not, we believe, found much favor in this country. A very extensive trial of the remedy has recently been concluded by Dr. L. B. Mandelstam, of Kazan, who publishes the results in *Vratch*, Nos. 5, 7, 9, 10 and 11, 1889. These experiments extended over a period of nearly three years, and the number of patients upon whom the phosphorus was tried was 450, their ages running from three months to four years. Of this number, however, 234 were excluded from the statistics, either because they did not take the phosphorus long enough or in the proper way, or because the disease in them was not sufficiently pronounced to make the experiment a satisfactory one.

Of the remaining 216 children, 120 were cured, 43 were markedly benefitted, in 30 no improvement was noted, and in the remaining 23 the treatment was discontinued on account of some intercurrent disease. The remedy was given dissolved in cod-liver oil, in the proportion of one part to ten thousand of oil, of which a teaspoonful was given once or twice a day. When it was not deemed advisable to give cod-liver oil, the remedy was administered, after the formula of Kassowitz, in a mixture composed of $\frac{1}{100}$ part of phosphorus, 15 parts each of gum arabic and sugar, 30 parts of almond oil, and 40 parts distilled water. Dose, a teaspoonful once or twice a day. No other remedy was employed except when diarrhœa was present, and then an attempt was made to cure this before giving the phosphorus.

The following are the conclusions which the author feels himself justified in formulating as a result of these experiments :

1. Clinical observation justifies fully the employment of phosphorus in rickets.

2. Phosphorus acts better, more quickly, and with greater certainty than any other remedies.

3. This drug, when given in small doses, even for long periods of time, is well borne by children, and causes in them no unpleasant effects.

4. Phosphorus is especially efficacious in controlling the nervous manifestations of rickets.

5. Periodical measurements and weighing of the children, as well as observation of the osseous structures, show that the disease is actually arrested in its course and cured, in the great majority of cases, under the influence of phosphorus.

Another trial of the same remedy was made by Dr. Shabanova, whose report is presented in *Vratch*, Nos. 16, 17, 18, and 19, 1889. She treated 105 patients, and obtained perfectly satisfactory results in 77. In 22 an improvement was noted, and in 6 cases there was an aggravation of the disease while the treatment was being continued. The first effects of the remedy were seen in an improvement in the nervous symptoms, and later, in

favorable cases, a change for the better was seen in the general health, and in the condition of the bones and muscles.—*Ed. N. Y. Med. Rec.*

THE ETIOLOGY OF GOITRE.—Dr. Th. Kocher, of Berne, first of all determined accurately in what parts of his own canton goitre was common. On comparing the water of these regions with that of goitre-free neighborhoods, he finds that the one striking difference is that where goitre is abundant the water contains a considerable quantity of organic or organized material, and he concludes that it is this factor which determines the prevalence of goitre in any district. He finds that in certain goitrous parts particular families who have access to special water-supplies in which there is not this quantity of organic matter remain free from goitre, although breathing the same air, living on the same soil, engaging in the same occupations, and eating the same food as their very goitrous neighbors. On comparing the chemical composition of goitrous and non-goitrous water in the Berne canton, the only other difference he found was that the quantity of sulphate of lime was less in the goitrous; but, as it is well-known that goitre is often found in those who drink water richly laden with this salt, this difference cannot explain the great pathological fact. Dr. Tovel has found that the water in goitre-free parts contains a very minute quantity of micro-organisms. And it has further been shown that if goitrous water is injected into rabbits the thyroid gland is very prone to swell, although in dogs the injections have no effect. Kocher's investigations do not certainly completely clear up this difficult subject, but they throw some light upon it, and as such are to be heartily welcomed.—*Lancet.*

ANCIENT AND MODERN SUPERSTITION IN MEDICINE.—Dr. Malcolm Morris (*Pop. Sc. Mo.*) has indicated some points in which mysticism, which was one of its predominant features in the middle ages, still lingers around the profession and practice of medicine. "There remains in the people," he says, "a belief in the efficacy of drugs as drugs—a belief that, as for every bane there must be an antidote, so for every disease there must be a curative leaf or root. Nature is distrusted; disease is still represented by some evil influence to be exorcised. In the popular mind disease walks the earth as a devouring fiend, and has a personality about it as of old. The phrases 'stricken with disease,' 'visitations,' and 'seizures,' are survivals of the conceptions of primitive times.

The mysticism survives in the courtly phrase and the ambiguous language of the modern practitioner. When sorely pressed by the sick man, the physicians' only armory is equivocation, from which he draws such verbal weapons as 'the state

of the constitution,' 'the tone of the body,' 'the general health,' 'lowered vitality,' and all that kind. . . . Are these not in some sort a survival of the circle of the horoscope?"

The profession is also at disadvantage because of skepticism, reacting from the implicit faith in drugs of the olden times, which "repudiates all aids and accessories: briefly it states its deliberate opinion that disease is infinitely better left to itself. The natural physiological energy of the body is the prime element in the healing process. This is neither more nor less than modern fatalism—waiting on events. Such a doctrine if successful, would be fatal to medicine." A third evil under which it suffers is materialism, which so far as the profession is concerned "may be carried to an injurious extreme. In modern pathology, for instance, as originated by the German school and taught by its apostles, while men are actively contesting as to the nature or formation of a certain cell—whether it be spindle-shaped, round, or ovoid; whether it be derived from this tissue or that—they are likely to lose sight of the real bearing of the case. By all means respect facts, and you cannot show better respect for them than by using. A medical inquirer is not a mere collector. Collect your facts and then reason from the data you have established. *A collection teaches nothing until it has been arranged.* The tendency at present is, in the majority of instances, to collect everything, and to arrange and to adduce nothing."—*Cincinnati Med. Jour.*

CHLOROFORM AND LOCOMOTOR ATAXY.—Dr. Thiem, having had to give a patient, with slight signs of locomotor ataxy, chloroform for the purpose of examining an abdominal tumour, was surprised to notice that as she was being helped from the room, while still somewhat under the influence of the chloroform, she walked with a typical ataxic gait, though this symptom was not ordinarily present. On watching other patients who were not suffering from this affection trying to walk while still partially under the influence of chloroform, Dr. Thiem convinced himself that the peculiar gait only occurred in the subjects of ataxia in whom the semi-narcotic state brings out the want of coördination in the movements of the legs. The explanation would appear to be that inasmuch as the peculiar gait is not due to any paralysis of the muscles, but only to the want of coordinating power, which is set in action by the control exerted by the muscular sense and the sense of sight, when, as in the case of a half-chloroformed subject of locomotor ataxy, both the central coördinating apparatus and the peripheral regulating machinery are in a more or less inactive condition, there is a double reason for the existence of the well-known jerking and sliding movements of these patients. It would appear then, that in doubtful

cases of locomotor ataxy some assistance towards a correct diagnosis might sometimes be obtained by partially anæsthetising the patient and then observing his gait as he walks across the room.—*Lancet*.

HYDRASTIS CANADENSIS IN DYSMENORRHOEA.—Dr. F. Jordan, of Buda Pesth, in a recent number of the *Pester medicinisch-chirurgische Presse*, illustrates the effect of the fluid extract of hydrastis, Canadensis in membranous dysmenorrhœa by the following case. A nullipara, aged 35, who had had regular profuse menstruation for from eight to nine days since the age of 12, was attacked with very severe hæmorrhage which lasted for eight days, after a slight injury sustained in jumping out of window. Since that time she has suffered the most intense pains at each period, and flesh-like pieces were expelled, which were recognized as detached uterine mucous membrane. From 1872 to 1888 she suffered from severe pains during menstruation, which subsided about the seventh day, when the hæmorrhage suddenly stopped. After a period of remission, which lasted about six hours, the pains came on again with greater intensity, assuming the character of real *dolores conguassantes* and only ceased when the patient had a sensation as if something had slipped down in her abdomen. The hæmorrhage recurred and usually lasted about five days. Treatment of various kinds was tried in vain. In January, 1888, Dr. Jordan had recourse to hydrastis Canadensis, at which 25 drops twice a day were given at each hæmorrhage. The result was that there was only slight hæmorrhage, lasting from three to four days, and very slight pain. Later on the patient began to take the remedy eight days before the hæmorrhage began, when it lasted only three days and the pain became still less. The patient was able to leave her bed during menstruation without pain and hæmorrhage becoming augmented.

RENAL COMPLICATIONS IN WHOOPING-COUGH.—Some time ago Dr. Stefano Mircoli pointed out that he had several times observed renal complications in whooping-cough. Thus, on one occasion, among ten children suffering from the disease, nephritis occurred in two cases, one of which died. The necropsy left no doubt as to the existence of the renal affection. During another outbreak, among thirty-five cases nephritis developed in four. Two of these died, and in one a post-mortem examination was made. The kidneys were examined microscopically, and were seen to be in a condition of severe parenchymatous nephritis. No microorganisms could be seen. Recently Dr. Mircoli has brought forward additional evidence on the subject. In a recent epidemic at Monterubbiano, of twenty-four patients three died, one from suppression of urine, another from suffoca-

tion in a paroxysm of coughing, and a third from marasmus. In the two latter cases, although during life there were no symptoms of renal affection, on post mortem examination venous stasis in the kidneys with commencing albuminuria was found. There was also a considerable amount of hæmorrhagic infiltration. Cultures of the kidney tissues gave negative results. Dr. Mircoli believes that the renal affection is due to venous stasis caused by obstruction of the vena cava through the violent paroxysms of coughing. According to him the kidney is affected, in whooping-cough, in 12 per cent. of cases occurring in children.—*London Med. Rec.*

TREATMENT OF HÆMORRHOIDS.—Some time since Unna strongly recommended the use of chrysarobin in hæmorrhoids. A report of twenty-two cases treated with this remedy now comes from a Russian physician, Dr. Kossobudski. True, he did not use the drug in such strong solutions as recommended by Unna (5 to 10%), yet the result was most gratifying. After washing the parts with a 2% carbolic acid, or a 1% creolin solution, and drying them with absorbent cotton, he applied three or four times daily a salve of the following formula :

R Chrysarobin, grs. xij.
Iodoform, grs. v.
Extract of belladonna . . . grs. jx.
Vaseline, ʒjv. M.

In cases of internal hæmorrhoids he prescribed suppositories as follows :

R Chrysarobin, grs. ʒj.
Iodoform, gr. ʒ.
Extract of belladonna, . . . gr. ʒ.
Cacao butter, grs. xxx.
Glycerine q. s. for suppository.

If bleeding was severe, tannin was added to the above. With such therapeusis the pain and bleeding disappeared within three or four days, and the hæmorrhoids had completely shrunk away in three or four months—*Centralbl. f. Chirurg.—Med. News.*

ECZEMA.—The following hints from Lassar's skin clinic are of practical value ; we have tested them in eczema. Instead of fats porous pastes are used, made of the purest vaseline with oxide of zinc and starch, rubbed slowly together. These may be readily mixed with most remedies in use ; they dry quickly and may be converted into permanent dressings by absorbent cotton, and this gauze be changed when saturated. On the face and other parts not accessible to bandages, ample powdering upon the paste-covered skin will afford a smooth and dry covering, which is easily removed by small oiled rags.

In eczema of all kinds the paste treatment offers

great advantage over ointments. Lassar's usual formula is :

- R—Acid. salicyl., 2
- Vaselin. flav., 50
- Zinc. oxid.,
- Amyli., āā 25

In *parasitic troubles* (herpes tonsurans, etc.) sulphur precipit. 10 per cent., soziodol, 5 to 10 per cent., or resorcin, 5 to 10 per cent., may be added. On hairy parts vaseline salves are better.

In ordinary *dry or moist eczema of the scalp in children* the head should be gently washed with chamomile and soap, and then the following applied :

- R—Acid. salicyl., 1
- Tr. benzoin, 2
- Vaselin. flav., ad 60

In *intertrigo*, penciling with a 3 per cent. solution of nitrate of silver should precede the salve.

For *frost-bites* :

- R—Acid. carbol., 0.5
- Vaselin.,
- Ung. plumb., āā 10
- Ol. olivæ, 5
- Ol. lavand, gtt. 10

M.—Ft.

For *calming inflamed skin* :

- R—Zinc. oxid., 25
- Ol. amygd., q. s.

M.—Ft. Pastu mollis.

In *acute eczema*, Lassar warns against watery solutions and compresses.

For *pruritus* :

- R—Acid. carbol., 1
- Menthol, 1.5
- Talci, ad 50

M.—Menthol powder.

- R—Menthol, 2.1
- Bals. peruv., 5
- Ung. Wilsonii,
- Lanolini, āā 20

(With care on face.)

For *pruritus ani*, sitz baths of tar-water and penciling with 2 to 3 per cent. nitrate of silver solution, also carbolized lead salve.

For *acne vulgaris rosacea*, a peel paste is used.

- R—B-Naphthol, 10
- Vaselin. flav.,
- Sap. virid., āā 20
- Sulf. præcip., 50

To be applied by the physician and to remain fifteen to sixty minutes; then gently removed and replaced by powder or white paste. This is repeated after peeled surface is healed; or the following may remain over night :

- R—Resorcin, 2.5-5.0
- Zinci oxid.,
- Amyl, āā 5
- Vaselin. flav., 12.5
- M.—Ft. Paste.

—*Int. Klin. Rundsch.—Times & Reg.*

REDUCTION OF TEMPERATURE BY A SPRAY OF WATER.—Dr. Placzek, Virchow's *Archiv* advocates spraying the entire body as an efficient means of reducing temperature. In an animal with high temperature, he succeeded in reducing the same two degrees by spraying the body with one and a half pints of water at a temperature of from 53° to 59° F., and immediately after with three ounces at 95° F. The after-spraying with water of a higher temperature dilates the capillaries, and this induces a consequent loss of considerable body-heat.

Thus in a tuberculous subject whose evening temperature would at times reach 104° the author reduced the same to normal by using somewhat over one pint of water of from 59° to 66° F. The temperature was with ease kept for four hours at this standpoint and then gradually allowed to rise, but not allowed to reach its former high standing.

Compared to the ordinary method of bathing, this treatment has the advantage of simplicity and comfort, factors not to be disregarded in private practice. The patient simply remains in bed, coverings and shirt are removed, a rubber cloth laid under him, and the *modus operandi* proceeded with. As each application does not require more than twenty-five minutes, it can be repeated several times daily.—*Medical Chronicle*.

HYPNOTISM AND SUGGESTIBILITY.—Dr. Townes had recently studied the subject of hypnotism in Paris, and claimed that it was a means that had too long been relegated to charlatans. In support of his claim that it should be recognized he cited several cases where patients had been cured by this mysterious agency. He showed that the phenomena of moving tables, etc., are real, that certain of our actions are made unconsciously, dependent upon complicated brain action and also on double personality. Hypnotism is a peculiar psychical state which we are able to create in the subject and which increases his suggestibility. From a medical standpoint the aim is to produce this state, so that suggestion will excite the nervous system to perform acts that will lead toward a cure. Homœopathy, miraculous waters, granules and Brown-Séquard's elixir of life act by suggestion, often resulting in a cure. The author closed by citing the conclusions adopted by the recent Congress in Paris; that hypnotism should be taught in medical schools, but should be under authoritative administration.—*Jour. Am. Med. Association*.

THE INVASION OF THE "MASSEUR."—We must beg our readers to keep a close eye upon the *masseur*. He is bearing down upon unhinged humanity with a steady and relentless stride. He develops in the midst of us, he sails over from Germany and England to us, while, if there are any graduates of Heilgymnastik still left in Denmark, Sweden, or Norway, we should like to know it; for it has appeared to us, after some busy morning, that they have all called. Truly, the *masseur* is among us. He is a man of great resources. As his fraternity increases, he does not lose heart, or complain of competition, or seek protection from the State—he simply enlarges his field. In olden times the rubbing of a stiff knee with officinal linimentum saponis was the centre and circumference of massage; soon, however, we learned how soothing was the emollient and theobromated hand upon the hyperæsthetic skin and diseased muscle. The *masseur* became firmly established as the resourceful prop of hysteria and unailing staff of morbid locomotion. But then the sinewy and insidious hand began to gather adventitious aids, and seek new worlds to conquer. Having organized its movements into a company of Gallic polysyllables, so that its manœuvres of *tapotiment* and *pétrissage* and *effleurage* should not be mistaken for plain, every-day slap-slap, jab-jab, and thump-thump, it proceeded to attack all the several diseases and organs of the body. Adipose tissue in excess was made to disappear, while glandular tissue, if mammary, was rubbed to make it grow. Massage has now applied itself to diseases of the eye, and granular lids are, *quoad* the granulations, artistically rubbed off; it has invaded the mouth and throat, reducing hypertrophied tonsils, opening the Eustachian tubes, and curing catarrh and deafness. The abdominal viscera were the early and easy subjects for this now illustrious science. The colon's lax vermicular waves are tempectuously hastened, and the modest stream from the smaller bowel has scarcely babbled through the ileo-cæcal valve before it is rushed madly into the rectum. The pelvic organs have of late received the devoirs of this new art; and the uterus has been rubbed and stroked and pommeled, all in pure French terminology, until this martyr-viscus could not help but free itself from adhesions and congestions, and pillow itself gently on its original vesical cushion. Lastly, we learn that the heart is to have massage. The heart has been, we are told by poets, torn and bruised, and bled and broken; but it remains for modern science to see that it shall have *effleurage* and *lomi-lomi*. There are still a few things left for the *masseur*. Can he not apply *tapotiment* to the brain, or, at least, to the cerebellum? Has he done justice to the kidneys? Might not the ovary receive a course of artistic jabbing before it is removed and bottled? When all fields are conquered, and every viscus springs responsive into

blooming juvenescence beneath his learned touch, we recommend the *masseur* to Christian science.—*Med. Record.*

DEATH FROM SUBLIMATE IRRIGATION AFTER ABORTION.—Seven years since, Tarnier introduced the practice of washing out the vagina with weak corrosive sublimate injections. The results proved satisfactory, and the injections came into vogue in German and English, as well as in French, lying-in hospitals, extending freely into private practice. Like every thorough method of counteracting deadly agencies in the human mechanism, sublimate irrigation is not free from danger, and although it greatly reduces the death-rate and proportion of puerperal fever cases in long series of labors, some cases of mercurial poisoning will occur in those series, notwithstanding the most careful administration of the remedy. In this country Drs. Dakin and Boxall have published very minute observations on mercurialism under the above-noted conditions; they appeared in the *Transactions of the Obstetrical Society* for 1886 and 1888. Dr. Legend read before the Anatomical Society of Paris, in April, a case of twin abortion, retained placenta, and death from acute mercurialism. Between the birth of the first and second child, 10 litres of a 1 in 2000 solution of sublimate were employed to wash out the uterine cavity, twice at an interval of three hours only. Immediately after each injection of sublimate a 2 per cent. solution of boracic acid was thrown up into the uterine cavity; but sublimate had been several times employed for vaginal injection. After the extraction of the second child the boracic solution was injected into the uterine cavity. The intra-uterine injections were discontinued, and boracic and carbolic solutions were used for the vagina. A day later gingivitis, salivation, colic and dysentery set in, and carried off the patient in five days.—*Brit. Med. Jour.*, Sept. 28.

INJECTIONS OF SULPHATE OF COPPER IN DYSENTERY.—Dr. W. Easley reports (*Lancet*) an interesting cure of dysentery by injections into the rectum of sulphate of copper. The patient had been suffering for about a month with the usual symptoms of the disease, and had been treated to little purpose with bismuth, gallic acid, and ipecacuanha. Finally, when he was growing worse, a solution, consisting of ten grains of sulphate of copper and one drachm of tincture of opium, in four ounces of water, was injected high into the rectum by means of a soft rubber catheter. The injection caused no pain, in a few hours tenesmus was relieved, and blood ceased to pass. On the two following days a small amount of blood reappeared, and the injections were repeated, but from that time convalescence was rapid.

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TORONTO, JANUARY, 1890.

*The LANCET has the largest circulation of any
Medical Journal in Canada.*

THE NEW BIOLOGICAL LABORATORY.

The handsome and excellently equipped buildings known as the Biological Laboratories of the University of Toronto, were opened on Friday, Dec. 20th, with a series of lectures given by Prof. Ramsay Wright of Toronto University, Profs. Osler and Welch of Baltimore, Prof. Minot of Harvard and Prof. Vaughan of the University of Michigan. With such a brilliant array of talent, it is needless to remark upon the success of the opening; it was such as to reflect credit upon any university and any country, and it must be admitted that in efficiency and advantages for biological study, these laboratories are second to none on this continent. This is a matter for sincere congratulation, among those interested in the higher education of our country to-day. The science, if it may be so called, of pharmacology, has been and is making great strides in all the centres of learning in Europe, and to a less degree in America. Now while we in Canada cannot hope to equal those countries which contain such centres of learning, in scientific attainments, any more than in their wealth, there being a more or less constant ratio between the two all over the world, we shall surely do well to emulate them, in placing advantages within the reach of those who possess the opportunity of following up the cognate branches of physical science.

This class of student is unfortunately all too

few in Canada. We are too young and too poor a country for the rank and file of students to be able to afford the time and money necessary to acquire an acquaintance with physical science as it is understood to-day by specialists in that science.

Certain it is that in every institution the elementary principles of a science must be taught and thoroughly learned, and when those special departments of biology which are of particular interest to those who are qualifying as physicians are being studied, there is a fixed line from which it is not well to diverge too far, for the simple, but absolutely certain reason, that the student's time will not permit it; and when we remember the many attractions which the study of biology possesses, especially when taken up with such advantages as are now to be found in Toronto, the fear is that the mind of the student may digress widely from the more practical applications of the science as it applies to man, and the art of medicine. We are not prepared to admit, as is stated by some, that the man who does not thoroughly know the development of the peritoneal membrane can have only a bungling and imperfect knowledge of that membrane. The clinical characters of this or any other tissue or organ, meaning by this, those peculiar processes and conditions which they evince in disease, are as important generally as is their embryological history, and to the physician far more so; and are in themselves so distinct and peculiar as never to be observed or known by the specialized scientist, whose knowledge is derived exclusively from observation in the laboratory.

The habit of the human mind is always toward extremes, and when we regard the tendency of medical education to-day, we incline to the belief that if in the short space of four years the average student is required to know and to master such extensive departments as those of Chemistry, Biology, Comparative Anatomy, Physics and many others, where there is so much to learn regarding the apparatus used therein, as well as the details of the science, it would not be surprising if some should complete their course in medicine without even having got as far as man—and know very little of the healing art as it is destined to benefit him. We have no desire to criticize severely those to whose labors and laboratory studies the practical physician owes so much, neither have we any desire to do other than commend those who, know-

ing the value of great laboratories of the old world, are desirous that they should be emulated in Canada in researches by experts. Let us however not forget, that whilst biology and comparative anatomy are all-important, we must not allow them to thrust from our minds the claims of "Morbid Anatomy" as applied to man. May we hope to see established an institution where instruction of a higher order may be given in this special branch of biology, which may stimulate research and yield valuable reward.

DOCTOR'S FEES TO THE COLLEGE OF PHARMACY.

In answer to enquiries relating to the conditions of registration under the Pharmacy Act, we submit the following extract from the amended statutes, sec. 31—"Nothing in this Act contained shall extend to or interfere with the privileges conferred upon legally qualified Medical Practitioners by The Ontario Medical Act, provided that where such Medical Practitioner desires to carry on the business of a Pharmaceutical Chemist as defined by this Act, he shall not be required to pass the examination prescribed by the College of Pharmacy, but he shall register as a Pharmaceutical Chemist, and comply with all other requirements of this Act." The fee for registration is defined by sec. 18—"There shall be payable to the registrar of the said college, for the uses of the college, on the first day of May of each year, by every person registered and carrying on business as a Pharmaceutical Chemist, the sum of four dollars. Provided, that in case such person shall carry on such business in more than one locality, the further sum of four dollars shall be payable by him as aforesaid for each such additional place of business. And provided, also, that all employees or assistants who manage, or have charge of such additional places of business, shall be legally qualified Pharmaceutical Chemists."

Sec. 21 declares that "Every Pharmaceutical Chemist carrying on business on his own account, shall display his certificate in a conspicuous position in his place of business."

The form of the certificate is given in schedule D. of the Act. It is merely a yearly license and as stated by sec. 17, every person registered is entitled to receive it.

We have been given to understand that, despite the explicitness of the law, the College of Pharmacy has lately been exacting from physicians desiring registration the sum of ten dollars, besides the legal fee above specified. A sort of so-called diploma is furnished for which physicians have no use, the annual license certificate being alone necessary.

The Act under which physicians conducting drug stores are compelled to register as druggists, was passed in March last, and there can be no doubt but the demand of ten dollars is beyond the powers of the Pharmaceutical Council.

In case the legal fee of four dollars is refused, the College of Pharmacy could be compelled to accept it or be held liable for any damages arising from the refusal.

It is sincerely to be hoped that no doctor carrying on the business of druggist will, through carelessness or indifference, pay the extra fee referred to above. When we consider the position of the average doctor in Canada to-day as to money earned for work done, charity-work, duty on medicines and instruments, it must be admitted that being mulcted in the amount of ten dollars for the privilege of selling drugs is not to be borne.

THE ONTARIO MEDICAL LIBRARY.

The Chicago Public Library has recently transferred, "without conditions," to the Chicago Medical Library its entire collection of medical books. This department was felt to be an incubus there, as it has been elsewhere in public libraries. All who properly may use medical books can consult them in medical libraries. To others they become priurient literature.

It is difficult for the authorities of a general library to determine who should and who should not be allowed to consult, for example, our standard works upon Jurisprudence; and yet these works in the hands of growing boys may become as unhealthily stimulating as the non-religious writings of good Queen Margaret of Navarre. The Toronto Public Library, we are informed, has about concluded a sale of its medical collection to the Ontario Medical Library. We should have been better pleased had the books in question been given instead of sold, but the Public Library Board doubtless felt that they must administer

the trust committed to them to its own best advantage.

In this connection we may remind the profession that the latch-string always hangs outside at the cozy rooms of the Medical Library, and that physicians visiting Toronto are invited to make use of the already large amount of medical literature to be found upon its shelves.

LAWSON TAIT AND THE SURGERY OF THE LIVER.

—Mr. Tait writing on the surgery of the liver in the *Ed. Med. and Surg. Jour.*, says:—When first I attacked the liver by surgical operation I certainly was in terror of hæmorrhage, for I thought that if an incision opened a large sinus the arrest of hæmorrhage would be a matter of considerable difficulty, but I was encouraged by an accident which befel me in performing an ovariectomy, for there, on undoing an adhesion to the liver, I tore a cleft in the free edge of the organ, certainly an inch and a half deep, which bled freely, and I was greatly alarmed; but I took a small piece of solid perchloride of iron about the size of a pea and rubbed it over the edge of the tear. The hæmorrhage stopped immediately, and my patient made an easy recovery, so that my respect for the liver greatly diminished. On one occasion I did open by my incision a sinus of considerable size, but I passed a thread by means of a fine needle down one side of it and up the other, and tied the sinus between the two limbs of the ligature. In this way the hæmorrhage was arrested, and I heard nothing of the ligature. I was also in fear of another condition which *a priori*, one might have expected, that it would be difficult to stitch the edge of the wound of a friable organ like the liver to the abdominal wall, and that the stitches would be very likely to give way. As a matter of fact, I have not found it so, and in not a single instance has this given trouble. In my operations upon abscesses of the liver all the cases have recovered but one.

GLYCERINE OF BORAX IN THE DIARRHŒA OF INFANTS.—G. Mansell Sympson, M.B., says in a communication to the *Lancet*: If we regard infantile diarrhœa as due to the excessive fermentation of food in the intestinal canal causing irritation and catarrhal condition of the intestinal mucous membrane, it seems reasonable to look for

a remedy to act both on the cause and effect. Glycerine itself is an antiseptic of no mean order, and relieves the pain and congestion of inflamed piles, chiefly mucous surfaces, while every mother knows the virtues of glycerine of borax when applied to the mucous membrane of the mouth. So it was no great step to introduce it further into the alimentary canal. Whether fed from the breast or brought up by hand, the motions of patients with diarrhœa infantum were like curds of milk, suggesting that the irritated intestine had hurried its contents on as quickly as possible. Again, they were very foul-smelling, suggesting great fermentation. Therefore the glycerine of borax has to do two things: to act as an antiseptic to prevent excess of fermentation in the stomach and intestines, and to soothe the mucous membrane thereof in passing over it. I have found it answer capially; the children like it, it lessens the griping pains, it renders sweet the offensive motions, and it stops the diarrhœa. One case died while under this treatment; the child was seven months old, had had diarrhœa two days, and was utterly worn out when I saw it. But I suppose there will always be cases which come under our notice too late for cure. I give it as follows: Glycerine of borax, twenty minims; tincture of orange, three minims; distilled water to one drachm. To be given every one, two, or three hours, according to the severity of the case or the age of the patient.

TURPENTINE IN THROAT AND LUNG AFFECTIONS.

—Dr. Spohn (*Med. and Surg. Rep.*) says: "I have been using pure oil of turpentine in affections of the throat and lungs for some time, and find better, and more satisfactory results, than from any other remedy I ever tried. I use the ordinary hand atomizer, and throw a spray of the liquid into the throat every few minutes, or at longer intervals, according to the gravity of the case. The bulb of the instrument should be compressed as the act of inspiration commences, so as to insure the application of the remedy to the whole surface, which can be done in cases of children very successfully. It is surprising how a diphtheritic membrane will melt away under an almost constant spray of pure oil of turpentine. I now use the turpentine spray whenever a child complains of sore throat of any kind.

In cases of tuberculosis of the lungs, bronchitis, and the later stages of pneumonia, I have found the turpentine inhalation very beneficial. I use an atomizer, or paper funnel, from which the turpentine may be inhaled at will. I hang around the bed, and in the room, flannel cloths saturated with the oil of turpentine, in all cases of catarrhal bronchitis—in fact, in all affections of the air passages; and my patients invariably express themselves as being very much relieved.

PSYCHICAL AND PHYSICAL CHANGES FOLLOWING REMOVAL OF THE OVARIES.—In an elaborate study of this subject by Dr. Glaevecke (*Archiv. f. Gyn., Med. Rec.*) the author says: "After removal of the ovaries, menstruation ceases permanently in 88 per cent. of the cases, either at once, or after a certain interval, while in the other twelve per cent. the flow becomes scanty and irregular. Vicarious hæmorrhages are rare. In one-half of the cases observed the menstrual molimen persisted after the cessation of the flow. The usual climacteric phenomena, vertigo, irregular sweating, leucorrhœa, etc., are common, as well as the atrophy of the genital organs which follows the establishment of the menopause. Even when the uterus is considerably enlarged, by reason of the presence of chronic endometritis or fibroids, it commonly returns to its normal size after oöphorectomy, or even becomes atrophied. The general condition usually improves after castration." In forty-two per cent. of his cases the patient became stouter. Sexual desire was diminished in the majority of the cases; in some instances it was extinguished. The physical disturbances were most marked, sometimes amounting to melancholia. "In short," says the writer, "removal of the ovaries induces an artificial menopause which is exactly similar to the natural one."

THE EFFECTS OF ALCOHOL ON THE SECRETION OF BILE.—Dr. Cheltsoff has (*Lancet*) recently been making experiments upon dogs with a view to determine the nature and amount of the influence of alcohol upon the secretion of bile. He made biliary fistulæ in the animals, and after all the disturbance caused by the operation had passed off he proceeded to observe the effect of introducing alcohol in various quantities into the stomach. The bile as it was secreted was collected in glass

receivers, which were changed every few minutes, the contents being measured, weighed, and otherwise examined. The results showed that small quantities of alcohol either have no perceptible effects on the bile or serve to increase it slightly. Large doses, on the other hand, perceptibly diminish the flow, though sometimes there is at first a temporary increase. Medium doses do not give any constant result. Dr. Cheltsoff has come to the conclusion that the alcohol acts directly on the hepatic cells.

TREATMENT OF A COMMON COLD.—Dr. S. Wilson Hope, writing to the *Br. Med. Jour.*, says: It may not be as widely known as it deserves to be that 20 grains of salicylic acid, given in liq. ammon. acet. three or four times a day, will so far control a common cold that the aching of the brow, eyelids, etc., and during movements of the eye, will cease in a few hours, while the sneezing and running from the nose will also abate, and will disappear in a few days, and, more fortunate still, the cold will pass off, and not finish up, as is customary, with a cough. It may be that it is only in persons tainted with rheumatism where we find a chill followed by such a train of troubles, and certain it is that different persons suffer in different ways after a chill. But for a very great number of people of fair health, who are liable to take a common cold, it is highly desirable to avoid a cough, and the salicylic acid treatment places this in our power.

SULPHUR IN A PALATABLE FORM.—In the *Practitioner*, Sir Alfred S. Garrod gives his experience regarding the uses of sulphur taken in small doses, and for a considerable period of time in the treatment of disorders of the alimentary canal and liver; also in certain diseases of joints, especially rheumatoid arthritis; and, lastly, in chronic muscular rheumatism and skin diseases. The form selected by him for the exhibition of the drug is a lozenge containing five grains of the milk of sulphur and one grain of cream of tartar. This lozenge is far from disagreeable, the cream of tartar giving it a pleasant acidulous taste; and it contains enough sulphur for therapeutic purposes. Sir Alfred claims that the stomach itself is probably little influenced by the sulphur, as the surface and contents of that organ are usually acid in reaction.

and possess no solvent power; but that when it arrives in the duodenum, and meets with a different condition of the mucous membrane, and the presence of bile and pancreatic fluid, both of alkaline reaction, more or less of it becomes converted into a soluble sulphide, which is absorbed by the portal vessels. The presence of the cream of tartar in the lozenge helps to prevent the formation of any soluble sulphide in the stomach, and hence the absence of sulphurous eructations. Sir Alfred Garrod finds that even this small quantity of sulphur usually produces appreciable laxative effects, and patients can be readily induced to persevere in using the lozenges for an almost indefinite time. Sulphur given in the form just described exercises a markedly beneficial effect in many morbid states of the alimentary canal and liver, such as hepatic sluggishness, piles, and hæmorrhoidal bleeding; besides which the continual use of the lozenge is often quite effectual in obviating habitual constipation without being attended by the unpleasant action often pertaining to ordinary aperient medicine. Much benefit was also derived from the continued use of the small doses of sulphur in chronic forms of rheumatoid arthritis and gout, and in many cases of muscular rheumatism.

LOCAL USE OF IODOFORM IN DIPHThERIA.—Dr. Lindley writes to the *Boston Med. and Surg. Jour.* that he has treated nine cases of diphtheria by insufflation of iodoform every three hours. All recovered but one, who died of an inter-current pneumonia. His conclusions are as follows:

1. It prevents the multiplication of bacteria.
2. It is a soothing local anodyne.
3. It is like alcohol, in having no toxic dose where the patient is suffering from the diphtheritic poison.
4. It is so near impalpable that it reaches all portions of the diseased surface.
5. It adheres for a long time to the surface where it is applied, and thus has excellent local effect before it is absorbed.
6. It does not cause nausea, and thus interfere with nutrition.
7. It does not produce diarrhœa or salivation, as is possible from an overdose of the bichloride.
8. It is quickly and easily applied.

DOES THE BABY REQUIRE WATER?—This ques-

tion is frequently asked and is often erroneously answered. It is true of infants, as well as adults, that water is necessary to their proper care. They sometimes require more water than is contained in the mother's milk. The infant is many times permitted to suffer from thirst, which may be the sole cause of its fretfulness. A child, when thirsty, may nurse the breast frequently and still not be satisfied, as evidenced by its paroxysmal crying as soon as removed from it. In such an instance if cold water be given the child will become quiet at once. The physician should be careful to caution the nurse to occasionally offer the baby cold water to drink, and little experience is required to ascertain whether the child wants the water or not. Excess of water does no harm, and it is speedily absorbed, therefore no evil can come of giving the infant large quantities of water, both in winter and summer.

TABLE OF INFECTIOUS DISEASES.—The following useful table, taken from *The Hospital Gazette*, is more complete and extended than the list we gave a few months ago:—

Name of Disease.	Length of Incubation Period.	Infection Lasts Usually.	Infection Lasts.
Typhus.....	1 to 21 days.....	9 days..	3 to 4 weeks.
Enteric.....	1 to 28 days.....	15 days.	4 to 8 weeks, till diarrhœa ceases.
Relapsing.....	4 to 10 days.....	6 days..	Until relapses cease.
Cholera.....	hours to 10 days.....	under 72 hours.	Throughout attack; greatest during height of disease.
Yellow Fever.....	hours to 15 days.....	few hrs.	
Scarlatina.....	hours to 7 days..	2 days..	8 weeks; end of desquamation.
Measles.....	7 to 14 days....	12 days.	3 to 4 weeks, " "
Rùtheln.....	4 to 21 days....	15 days.	2 to 3 weeks.
Small Pox.....	5 to 14 days....	12 days.	3 to 6 wks. } Until every scab is fall'n off
Chicken Pox.....	4 to 18 (27) days.	10 days.	4 weeks. }
Diphtheria.....	2 to 12 days....	5 days..	3 to 8 weeks, until all discharges have ceas'd (?) 14 to 21 days.
Influenza.....	2 to 7 days.....	6 weeks or longer.
Whooping Cough.....	7 to 21 days.....	14 days.	
Contagious Pneumonia.....	1 to 20 days.....	6 days..	
Mumps.....	4 to 24 days....	18 days.	3 to 4 weeks.
Erysipelas.....	1 to 8 days.....	4 days..	Until end of desquamation.
Puerperal Fever.....	2 to 6 days.....	
Rabies.....	6 days to 2 years.	6 weeks.	Disease usually develops within 4 months

The period of quarantine to be enforced upon the apparently healthy members of a household in which there is infectious disease will be a few days longer than the longest incubation period, dating, of course, from the last exposure to the infection.

VERMIFUGE.—The *Journal of Pharmacy* gives the following:—A whole cocoanut, grated fine,

mixed with milk, and taken on an empty stomach on rising, is fully as reliable a tæniacide as male fern, kousso, or pomegranate, etc., it is far more agreeable to the taste. No after treatment is necessary, as a single dose is usually all-sufficient.

POT. IODID. AS A CARDIAC TONIC.—M. German Sée, says *The Lancet*, has recently pointed out, before the Academy of Medicine, that iodide of potassium, far from being a depressant, is really a cardiac tonic, of almost equal value to digitalis or strophanthus in certain cases. Indeed, he says that iodide of potassium is the real cardiac drug (*vrai médicament du cœur*), since, when prescribed in cases of uncompensated mitral lesions or affections of the myocardium, it increases the cardiac power and raises vascular tension. Thus, by subsequently causing dilatation of the arterioles, it enables the heart to recover its power and affords also better facilities for the coronary circulation, thus improving the nutrition of the heart muscle.

ANTISEPTIC COTTON.—The following formula is given for the preparation of antiseptic cotton:

Biniodide of mercury . . . 8 parts.
Iodide of potassium 3 parts.
Glycerin 120 parts.
Distilled water 2,400 parts.

Absorbent cotton is to be soaked in the solution and then dried.

DIPHThERIA.—A French method of treating diphtheria (*Weekly Med. Rev.*), consists of swabbing out the throat, twice daily, with the following:—

R,—Ac. carbolic (concent'd. sol.), grms. x.
Camphor, " xxx.
Alcohol, " x.
Sweet oil, 50—M.

The camphor is not essential.

In the interval, irrigate the throat every two hours with a one per cent. carbolic solution, by means of an ordinary fountain syringe. Every particle of false membrane should be charred and removed at each sitting.

SPIRITS OF TURPENTINE IN POST PARTUM HÆMORRHAGE.—It is said (Mayne, *St. Petersburg Woch.*) that when all the usual remedies have failed in cases of post partum hæmorrhage, the introduction of a piece of lint saturated with spirits

of turpentine is always successful. The result is that the uterus invariably contracts rapidly and all bleeding is checked. No disagreeable results have ever followed this treatment. In one case, when the patient was almost pulseless, it even seemed to act as a stimulant.

THE ADMINISTRATION OF SANTONINE.—Dr. Lewis, of Berlin, states that santonine should be given in its least soluble form, as the desired effect is not a general, but a local one. He recommends the administration of it in some oil, such as coconut oil, olive oil, cod-liver oil, or castor oil. Some of the ethereal oils, which are so destructive to the lower forms of animal life, would be suitable in this connection.

RINGWORM OF THE SCALP.—The treatment consisted (*Med. Analec.*) in the application of a one per cent. ointment of protochloride of iodine in lanoline. Every second day the head is sprayed with warm water, and then it is dried and rubbed for some time with this ointment. It is possible by this means to cure ringworm of the scalp within a few months without resorting to epilation.

HEADACHES FROM ALCOHOL AND TOBACCO.—The following is said, *St. Louis Med. & Surg. Jour.*, to be an excellent "straightener" after the too great consumption of alcohol and tobacco:

R—Spts. ammon. aromat., . . . ʒ ss.
Spt. chloroformi, ℥ x.
Aquæ, ʒ j.—M.
Sig.—Pro dosi.

ANOTHER HYPNOTIC.—Chloralamide is a new candidate for favor as a hypnotic. It is a combination of chloral and formamide. The drug is in the form of colorless crystals, soluble in 9 parts of water and in 1½ of spirit. The dose is from 15 to 60 grains, and its action is produced in about half an hour, the sleep lasting from 6 to 8 hours. It is said to have no effect on delirious or greatly excited patients.

MALARIAL FEVER.—Dr. H. A. Sutwiler, of Flatonia, Texas, recommends (*Galliard's Med. Jour.*) cincho-quinine in those cases where the sulphate cannot be borne, giving fifteen grains at a dose, to be repeated in two to four hours. It has given him the happiest results.

TREATMENT OF PHLEBITIS.—Muselier recommends (*L'Union Méd.*), the following:—In cases of simple phlebitis, leeches should be applied and unctions of mercurial or opium ointment thoroughly rubbed in. Local baths are to be used if the inflammation involves an extremity. If the vein suppurates, free drainage is at once to be established, it being remembered that in spontaneous phlebitis the danger resides in the possibility of embolism. To prevent so grave an accident, the limbs should be placed in cushions and elevated in such a manner as to favor the venous circulation toward the trunk and the disappearance of the œdema. Fixation is also a necessary accompaniment of the treatment, and all abrupt movements are to be avoided lest embolism should occur, and even in the application of mercurial ointment violent rubbing should be avoided for fear it might dislodge a clot. If the phlebitis is of long duration and there is much œdema of the limb, it may be well to apply an Esmarch bandage, and if, as a result of this compression, atrophy of the muscles occur, recourse must be had to electrical currents, massage, and baths.

INTESTINAL OBSTRUCTION.—Jonathan Hutchinson gives the following (*Arch. of Surgery*) as the principles which guide him in all cases of acute intestinal obstruction: He believes that in all cases in which obstruction is recognized, whether the symptoms are severe or mild, one of the first measures adopted should be the administration of an anæsthetic, under the full influence of which, intestinal spasm will be relaxed, and the passage of scybalæ, gall-stones, or other impediments favored. While anæsthetized, the patient's abdomen should be carefully examined by the surgeon, who should also use enemata, and practise abdominal taxis. An accurate diagnosis of the cause of obstruction is not often possible, and the early use of anæsthesia and taxis is successful in many cases, whatever the causation, and prejudicial to but few. If these measures fail, and the symptoms increase after anæsthesia, exploratory laparotomy should be resorted to.

Intussusception in infants under one year should be treated wholly by taxis and enemata, as the prospect of recovery after abdominal section at this age is exceedingly slight. In older children, laparotomy is probably the best treatment. If the

diagnosis is plugging of the gut by a gall-stone, belladonna should be freely administered, and if pain is severe, prolonged anæsthesia; also systematic efforts should be made to force enemata beyond the ileo-cæcal valve. Under no circumstances does this latter condition justify an operation, as with the above measure the probabilities of recovery are great. In cases of long duration, either the "rest, opium, and starvation plan," feeding entirely by the rectum, or repeated recourse to taxis and large enemata, should be adopted.

Mr. Hutchinson describes his method of taxis thus: Under full anæsthesia, the bladder and the bowels being empty, the surgeon forcibly and repeatedly kneads the patient's abdomen, pressing its contents in all directions. The patient is then turned on his abdomen, upheld by four strong men, and vigorously shaken. Following this, he is supported by the feet, copious enemata given, and, while still in this position, vigorously shaken upward and downward. The latter, Mr. Hutchinson considers exceedingly important. However rough such treatment may seem, it is in no sense unscientific, but thoroughly rational, and its efficacy is attested by the reports of Mr. Hutchinson's cases.

PROTRACTED CONSTIPATION.—In Dr. James O'Beirne's book, *New Views of the Process of Defecation*, Dublin, 1833. The author gives (*Br. Med. Jour.*) the history of the case of a girl aged 19 who "had not a stool of any kind, or passed even flatus per anum since early in the preceding December, a period of nearly six months."

SHINGLES.—E. M. Sympson, M.B., writes to the *Br. Med. Jour.* that "the best local application to the vesicles in herpes zoster is flexile collodion. This quickly shrivels them up, and I fancy prevents the appearance of any, where it has been painted on. I feel sure he will not be disappointed with it."

TUBERCULOSIS FROM CIGARS.—It is stated that a German physician, on examination of a number of cigar tips, found that many of them were infected with tubercle bacilli. The makers were tuberculous, and in the manufacture of the cigar, moistened the tips with their saliva.

ELECTIONS FOR THE MEDICAL COUNCIL.—We beg to call attention to the advertisement, appearing in this issue, of the election of the Medical Council. It is important that the voting papers should be promptly filled in, and returned to Dr. Pyne, the Registrar.

As Dr. Sheard, the business manager of this journal, is in New York, remittances, etc., will not be acknowledged for about ten days, but this should by no means stop the remittances. Send them along.

The Royal College of surgeons has passed favorably upon Sir Morell MacKenzie. He was censured for publishing his book concerning the Emperor, but at the general meeting he had but one accuser.

We are pleased to note that Dr. D. C. Meyers, L.R.C.P., London, Trin. '88, recently received the diploma, of M.R.C.S. Eng.

Dr. J. Gibb Wishart having severed his connection with Dr. Ryerson, is now carrying on his speciality at his office, Carlton Street.

IN France the doctor's claim on the estate of a deceased patient has precedence of all others.

DR. D. C. MEYERS (Trin.) has lately passed the L.R.C.P. London examination.

M. RICORD, the famous Paris physician, died lately of a double pneumonia.

Books and Pamphlets.

THE PHYSICIAN'S VISITING LIST FOR 1890. (Lindsay & Blakiston's). Philadelphia: P. Blakiston Son & Co., 1012 Walnut Street.

Contents.—Almanac for 1890 and 1891; Table of Signs to be used in keeping accounts; Marshall Hall's Ready Method in Asphyxia; Poisons and Antidotes; The Metric or French Decimal System of Weights and Measures; Dose Table; List of New Remedies; Posological Table, Meadows; Disinfectants and Disinfecting; Examination of Urine, Dr. J. Daland; Incompatibility, Prof. S. O. L. Potter; Table for Calculating the Period of Utero-Gestation; Sylvester's Method for Artificial Respiration; Diagram of the Chest; Transporta-

tion of injured persons. Regular edition—For 25 patients weekly, \$1; up to 100 patients, 2 vols., \$3.

New Monthly Edition, without dates,

Requires only one writing of patient's name for the whole month; plain binding, without flap or pencil, 75c.; leather cover, pocket and pencil, \$1. This book is made in all sizes and styles to meet the wants of all physicians. It is not an elaborate, complicated system of keeping accounts, but a plain, simple record, that may be kept with the least expenditure of time and trouble—hence its popularity. It can be bought through any bookseller, or, upon receipt of the price, will be sent postpaid by the publishers to any address.

CHRONIC BRONCHITIS AND ITS TREATMENT; a Clinical Study, by William Murrell, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital; late Examiner in Materia Medica in the University of Edinburgh, and in the Royal College of Physicians of London. London: H. K. Lewis, 1889. Toronto: Vannevar & Co.

Our readers will have noticed extracts from papers by Dr. Murrell, on the subject of chronic bronchitis, winter cough, etc., in our columns, and those of them who have followed the advice then given, especially as regards inhalation, will have reason to be thankful to him for his studies in this direction. The present work is a record of clinical work, and the results thereof, extending over a period of about ten years. The book is small, inexpensive and clearly written. It is one of the best and most satisfying efforts in its way that we have seen in a long time.

THE CURE OF CROOKED AND OTHERWISE DEFORMED NOSES. By John B. Roberts, A.M., M.D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic, Lecturer on Anatomy in the University of Pennsylvania, Surgeon to St. Agnes' Hospital. Philadelphia: P. Blackiston, Son & Co., 1889. Toronto: Carveth & Co.

An interesting and instructive little brochure of 24 pages. Illustrated.

Births, Marriages and Deaths.

At Grand Valley, Ont., on the 13th December, the wife of R. R. Hopkins, M.D., of a son.