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ORIGINAL ARTICLES.

A CASE OF COLLOID GOITRE, INVOLVING THE MIDDLE LOBE OF THE THYROID GLAND, ASSOCIATED WITH ASTHMATIC ATTACKS AND RESULTING IN SUDDEN DEATH.*

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Mrs. M., aged 51; patient had suffered from goitre for some seven years which had occasioned her a great deal of discomfort. The tumor was enlarging more rapidly of late. The ordinary means of treatment had been tried without success, when she was referred to the clinic of Dr. C. R. Dickson, Electrician to the Toronto General Hospital, on Wednesday March 10th, 1897. He examined and found her a suitable case for electrical treatment. Measurement showed the circumference of the neck at the upper part of the goitre to be $13\frac{1}{2}$ inches, at the middle $15\frac{3}{8}$ inches and at the lower part $15\frac{1}{2}$ inches. The goitre itself measured six inches transversely and four inches from above downwards, the prominence occupying the median line of the neck, the sides not being involved. Patient had one sister affected with goitre.

She was ordered to return to the hospital for treatment the following Friday, March 12th, which she did. The neck was prepared for operation in the usual manner, during which time she was telling the doctor the history of her case. A short superficial incision was made in the median line of the neck, a trochar and cannula were introduced about $\frac{3}{8}$ of an inch. The trochar was then removed, about a dram of thin serous-like fluid withdrawn and an equal amount of normal saline solution slowly injected, without discomfort. The cannula was left in position and the current from a voltaic battery, less than 20 milli amperes turned on. The patient was telling about previous attacks of dyspnoea from which she had suffered. On one occasion about 18 months before she had an attack during which she became livid and thought she would choke. This lasted for some hours. It was on account of difficulty in breathing and fear of a recurrence of these attacks that treatment was sought. While speaking, she was suddenly seized with spasmodic cough

* Read before the Toronto Clinical Society.

and cried out that she was choking. Respiration became gasping and stridorous with lividity of the face. The current was immediately stopped. She was placed on the operating table and all the recognized measures for resuscitation were applied. She continued to breathe for some moments though the radial pulse was gone and the pulsations of the heart were imperceptible to the stethoscope. Artificial respiration, Fell's forced respiration apparatus, etc., were tried for some time but without avail.

Necropsy, March 13th, 15 hours after death. The body was that of a fairly well developed and well nourished woman about 50 years of age, 5 feet, 4 inches in height and weighing 155 pounds. Postmortem staining was well marked on the dependent parts of the body. Rigor mortis very firm. No evidence of putrefaction. Some dark-colored, dry, blood was present in the left nostril. There was a marked prominence in the median line of the neck, extending from the upper margin of the sternum below, upwards for three inches. Transversely it extended outward under cover of the sterno-mastoids on either side, measuring $4\frac{1}{2}$ inches, the greatest prominence being in the middle line. The tumor was soft and semi-fluctuating. In its centre was a small operation wound which admitted a probe without resistance, $\frac{3}{8}$ inch in depth. No important vessels were found on dissection in the line of puncture; the sterno-hyoid and sterno-thyroid muscles were much hypertrophied, forming very prominent muscular bands over the surface of the tumour. On exposing the tumour it was found to consist of the enlarged isthmus of the thyroid gland. It was of a dark reddish color. On incision a considerable quantity of dark, reddish-colored, semi-gelatinous fluid escaped. The mass contained larger and smaller cystic cavities. There were some dark-colored blood clots and evidence of previous hæmorrhage into it. Behind the goitre the trachea was considerably flattened, but the passage was not occluded and when relieved of pressure assumed its normal appearance. The enlarged middle lobe of the thyroid had pressed the lateral lobes outwards beneath the sterno-mastoid muscles, so displacing the structures in the carotid sheath. The veins of the neck showed extreme distension, being quite as large as one's thumb. The larynx was normal in appearance. The trachea contained some reddish-colored, frothy mucus and the mucous membrane was congested. Right lung weighted 18 oz.; left lung $19\frac{1}{2}$ oz. Both lungs and pleural cavities were normal except slight hypostatic congestion at the bases. The heart weighed $7\frac{1}{2}$ oz.; right side was full of dark fluid blood; left side was contracted and empty. The heart muscle was firm and of a brownish-red color. Tricuspid orifice was enlarged so as to admit four fingers, the other orifices and the valves were normal. The coronary arteries were normal and free from atheroma.

Abdominal cavity. The organs generally were dark in color and congested. The left kidney slightly rough and capsule adherent. Otherwise the abdominal organs gave no gross evidence of disease. The inferior vena cava was distended with blood. Abdominal aorta showed atheroma.

Brain. Weight, 49 oz. Showed congestion of its membranes.

Microscopic examination of the goitre showed it to be composed of vesicles, irregular in size and shape, lined with epithelium, which in places showed evidence of rapid proliferation, almost suggesting malig-

nancy. This, however, was merely the appearance of the actively secreting glandular tissue. The vesicles were filled with colloid material and contained epithelial cells in various stages of colloid degeneration. The tissue was exceedingly vascular, the vessels being engorged with blood, and at places there were quite extensive irregular haemorrhages.

The post mortem examination pointed to *asphyxia* as the cause of death, as shown by the engorgement of the right side of the heart and general venous system, viscera and membranes of the brain, with blood exuding from the nostrils, and blood-stained, frothy mucus in the trachea. This may appear to contradict the statement previously made, that *respiration* continued after the pulse and heart's action ceased, but they were doubtless futile respiratory efforts trying to get air past the obstruction caused by the goitre.

This explanation is in accord with the clinical signs. The fatal attack came on with spasmodic cough, gasping, stridorous respiration, followed by lividity and cyanosis. There was evidently increased pressure upon, and irritation of, the recurrent laryngeal nerve, with spasm of the glottis and consequent asphyxia. We know that goitres are prone to undergo such rapid increase in size from vascular engorgement, or in some cases, from haemorrhages into the gland, accompanied by symptoms from the increased pressure produced.

The very small heart in this case, $7\frac{1}{2}$ oz., though the woman weighed 155 lbs., is a point of interest. An abnormal heart is said to be present in fully half the cases of goitre. Schranz in autopsies on 308 goitrous subjects found heart trouble in 67%. The functional involvement of the heart in cases of exophthalmic goitre and the cardiac symptoms produced by overdoses of thyroid extract are also suggestive in the same connection.

This case might be profitably considered from three points of view.—

1st. Goitre involving the *isthmus* of the thyroid gland only.

2nd Goitre as a cause of dyspnoea, resembling and sometimes mistaken for asthma.

3rd. Goitre as a cause of sudden death.

First, judging from the literature on the subject, goitre limited to the *thyroid isthmus* would appear to be very rare. In fact I have been unable to find any case recorded. Involvements of the isthmus with coincident involvement of either one or both the lateral lobes is common enough. Osler says that it may occur affecting the isthmus alone, without giving any references.

Prof. Adami has recently had a case of enlargement of the middle lobe, with periodical attacks of dyspnoea, extending over eight years, and eventually death resulting from pressure on the trachea, the passage being reduced to a mere slit. I think it is quite probable, however, that the condition involving the isthmus alone occurs more frequently than a research into literature would indicate.

Second, the occurrence of periodical attacks of the most urgent dyspnoea—constituting the so called "thyroid asthma" is by no means of rare occurrence. It occurs earlier and is more urgent and dangerous to life when the enlargement is limited to, or affects chiefly the middle lobe.

Retrosternal goitres, small though they may be, are particularly liable to produce the most distressing dyspnoea. The dyspnoea is usually explained as being due to the direct pressure of the goitrous tumor on the trachea or to irritation of the recurrent laryngeal nerve. The periodical character of the attacks is due to the tendency to rapid increase in size of the gland at certain times from vascular changes, before spoken of.

It would appear that these cases of thyroid dyspnoea are not infrequently mistaken for true asthma, especially where the neck is short and fat and the goitre is smooth and regular in outline: or when it involves the isthmus or is retrosternal. This should be borne in mind in obscure cases of dyspnoea.

Third, death may result during these attacks of dyspnoea and often suddenly. It occurs from various causes—direct pressure on the trachea, on the recurrent laryngeal nerve with spasm of the glottis, from pressure on the vagus nerve and stoppage of the heart or from pressure in the cervical veins, with consequent cerebral congestion. Treatment during the attacks—usually by division of the isthmus or by tracheotomy is attended by a high mortality.

The possibility of a goitre producing sudden death is important from a medico-legal point of view, though I have never seen it stated among the causes

THE ALKALOIDS.*

By LLEWELLYN B. ASHTON, M.D., C.M., Phm. B.

Perhaps none of the organic compounds possess greater interest to the therapist than the alkaloids, in the display of their effects in treatment, especially on the nervous system which they so profoundly impress.

The attractions too which these vegetable products hold for the working chemist of to-day is easily accounted for, composing as they do so very small a proportion of the plants in which they are found, yet representing in many cases their whole virtue and activity as remedial agents. It is quite natural then that their composition should be carefully studied with a view to explaining the changes by which they are produced in Nature and, if possible, to imitate those processes in order to reproduce these valuable agents by artificial means. So we find Fischer (Berlin 1895) building up caffeine from urea; Königs plodding along steadily on quinine; Knorr, of antipyrine fame, working away on morphine; Petit on eserine, and many more, each on his own hobby.

In 1804, Sertürner, a German apothecary, demonstrated an active principle in opium. His experiments extending over a period of eleven years, when he isolated morphine, learned its characteristics and differentiated it from narcotine. This constitutes the first knowledge on record of this class of proximate principles. For this attainment the Institute de France granted him a prize of two thousand francs.

As to their occurrence: the alkaloid is found forming in all parts of the plant to which it is native—except the growing wood or stem, being

* Read before the Medical Society of Trinity Medical College, Toronto.

accumulated in those parts destined sooner or later to become detached from the parent stem, *i.e.*, bark, fruit, seeds and root cortex.

They are the nitrogenous products of retrograde metabolism, probably purely waste material. They may be even injurious to the plants producing them. The poppy, for example, can be poisoned by a hypodermic injection of its alkaloid, morphine—auto-intoxication, if you like. They would seem then to be of no service to the plant, except, may be, in the economy of Nature to protect them from the ravages of predatory animals or parasitic organisms.

In the cinchona plantations, instituted by the British government in India, it was found on experimenting that although the same vegetable zone and altitude were secured as the tree enjoyed in its native forests of Peru, the conditions of constant moisture, due to the daily rain and fogs there had to be imitated by artificial "mossing" by covering the bark with moss or cotton wool wrapped around the trunk, before an equal yield of quinine could be produced. This would seem to confirm the theory that its formation might be due to some anti-parasitic effort, stimulated by the micro-organisms which thrive under these conditions of combined moisture and heat with absence of sunlight.

About two thirds of the alkaloid-producing plants which have been studied are poisonous, the remainder being simple bitters.

Besides these bases found in the vegetable kingdom, substances answering to many of the alkaloidal tests are produced in the putrefaction of dead animal tissues, as is frequently seen in canned meats, fish and the tyrotoxon of ice cream. These constitute the cadaveric alkaloids or ptomaines; while the breaking down waste of living albuminous matter forms another class known as Leucomaines, of which urea may be taken as a type. In passing, too, it might be said that many of the highly complex organic compounds, notably the coal tar derivations, which form so large a part of the *materia medica* of to-day, should be classified as the artificial or synthetic alkaloids, their relation chemically and physiologically being so closely allied.

Physically, the natural alkaloids occur either as non-volatile solids or as volatile liquids; all containing the elements carbon, hydrogen and nitrogen. The solids, which are much the greater number form, with few exceptions, as white crystals and contain oxygen in addition to the elements already named. Chemically, they may be considered to be compound ammonias, *i.e.*, NH_3 , in which one or more of the hydrogen atoms has been replaced by a hydro-carbon or by an acid radicle. If by a hydro carbon radicle they are classified as amines; while if by an oxygenated radicle they are then known as amides. To the latter the solid crystallizable salts belong.

The name *alkaloid* would suggest some likeness to the alkalies in their general properties and in the laboratory we find this to be true. Their solutions turn red litmus blue: they combine with acids to form salts,—in doing so, however, they do not replace the basylous hydrogen in the acid, but behave like NH_3 , forming a hydro acid salt. They differ from the alkalies and alkaline earths in that they do not saponify the

fats, and that they are destroyed by heat. When subjected to destructive distillation they evolve an ammoniacal odor.

As has already been noticed the molecular structure of the members of this group is very high and as the more complex a compound is the more unstable it becomes, we find the alkaloidal solutions of the pharmacopœia are very prone to decompose, even under the influence of so lowly a form of organic force as the penicillium—one of the fungi or moulds—the hyphæ of which may be frequently seen forming in a solution that has been kept standing beyond a limited time, looking like so much cotton wool. This vegetable growth thrives at the expense of the salt contained, from which it is able to abstract certain elements—similar to the action of the yeasts on sugar—so as to completely alter its composition and render it inert or even irritating. The only safe procedure then would seem to be to have all such solutions freshly made as required.

It is now well known that the alkaloids do not exist naturally in a free state, but as neutral or acid salts, combined with the plant acids peculiar to their source—as meconic acid in opium; igasuric in *nuxvomica*; kinic or cincho-tannic in *cinchona*; tannic in coffee, etc.—these compounds being termed the native salts. The free alkaloids are nearly all insoluble in water, but easily dissolved by chloroform, ether, ethylic and amylic alcohols, benzol and benzine; while their salts are mostly water soluble, but insoluble in the solvents for free alkaloids.

Their salts are also precipitated from solution on the addition of an alkali. These facts then give a key to their isolation and it was by taking advantage of this that Sertürner reached his results in his early work and which still obtains to-day, now known as the “shaking out” process. It may be facilitated by the use of a glass bulbed separator with ground stop-cock and cork. The steps may be simple or more complex according as the associated constituents or plant extractives are soluble or not in the alkaloidal solvent, and so complicate the work; but the freed alkaloid may be readily run down by extending these principles a little. When it happens that two or more alkaloids exist in the one plant their separation may sometimes be accomplished by the differing solubilities of their salts, as in quinine from its many closely related fellows in the bark, or by the finding of a solvent for one not common to both, as in opium by treating first with ether which dissolves out the narcotine but not the morphine.

In order to determine the presence of an alkaloid in a given drug, a good working plan is to first macerate a ground sample for several hours in a stoppered bottle with about ten times its weight of Prollin's Fluid, shaking frequently. This is a liquid with remarkable penetrating power on the vegetable cell wall, and also an active solvent for the liberated alkaloid. It is composed of ether 325, alcohol 25 and strong solution of ammonia 10 parts. When this has been done, decant the clear liquor and agitate in a glass separator with a five per cent. solution of sulphuric acid, the acid sulphate being thus formed and held in solution in the lower aqueous layer. Separate the two layers and warm the acid solution to drive off any dissolved alcohol or ether. If any alkaloid is present, a cloudiness or precipitate will be shown on adding any of the general reagents for this class of proximate principles.

Of these, Mayer's solution, which is a double iodide of mercury and potassium will answer or tannic acid, forming insoluble tannates—(thus indicated in all cases of alkaloidal poisoning if quickly removed from the stomach); the hydrates and carbonates of the alkalies and alkaline earths, certain metallic salts, as mercuric chloride and lead acetate. iodine, iodides and bromides—all cases of chemical incompatibility, which facts have to be ever kept in mind by the physician in his prescription writing.

In the assaying of the tinctures or fluid extracts of the alkaloidal drugs the gravometric method is that most frequently used; the volumetric has been tried but not found sufficiently accurate. To illustrate this method the fl. ext. guarana may be taken. It should assay from three to five per cent. of caffeine, which exists as a tannate.

Place ten c.c. of the fluid extract with four c.c. solution of perchloride of iron in a glass mortar and stir in sufficient sodium bicarb, to form a stiff paste. Triturate the magma with chloroform in three portions of ten c.c. each to ensure extraction. Mix the solutions, filter through absorbent cotton, and evaporate to dryness in a tarred capsule on a water bath, weigh and multiply the weight in grains by ten, which equals the percentage of alkaloid present. The rationale of all this is quite simple; the tannin attacks the iron base, the alkaloidal base now becoming attached to the hydrochloric radicle of the ferric chloride as caffeine chloride.

This new compound in turn being decomposed through the agency of the soda bicarbonate—common salt is formed with the evolution of carbonic acid gas, the alkaloid set free is then washed out by the chloroform. The insignificant amount of coloring matter retained about balancing any loss in weight in the manipulation.

This product may be purified by dissolving in hot alcohol, then filter through animal charcoal and dry, by which snow white crystals are obtained. The process of extraction given before excludes tannates, gums, albuminates and inorganic acids. For roots and seeds, such as aconite, ipecac and nux vomica, which contain resins, fats and waxes, also soluble in chloroform, a modification has to be resorted to. Treat the chloroformic solution with a one-in-fifty solution of sulphuric acid, in a bulbed separator, using three portions of ten c.c. each.

A sulphate is formed leaving the resins, etc., behind. Now mix the acid solutions and render alkaline with ammonia, when the alkaloid will be precipitated. It may now be dissolved out by chloroform, separate, evaporate to dryness, as before, and weigh.

If a green extract of a leaf is presented which contains chlorophyll in addition to the fats, etc.,—as in belladonna or coca,—proceed as above until the acid solution is obtained, then agitate lightly with ether, in two portions of ten c.c. each. This extracts the green coloring matter; then proceed from the acid solution as before indicated.

Since we have mentioned the convenience of the bulb separator, it might be well to direct attention here to its application in Toxicology, for the isolation of an alkaloidal poison from stomach contents. It may

be accomplished by this same "shaking out" method, the principle of which has already been sketched. Having secured the suspected contents, acidulate with dilute hydrochloric or acetic acids, to insure the formation of a soluble salt, and if not quite fluid, dilute with distilled water, to insure their solution. Filter, set aside half the filtrate, which if required, is to be tested later for poisons other than alkaloids. Render the remainder alkaline with ammonia, when the alkaloid if present, will be precipitated. Transfer to the separator, add chloroform until the ppt. is dissolved, then draw off the lower chloroformic layer. Now cleanse the separator and return the chloroformic solution to it, add an equal volume of a one-in-fifty solution of sulphuric acid, agitate gently and again separate. The alkaloid is now in the upper layer as an acid sulphate in solution. It only remains to divide this solution into as many parts as there are likely poisons indicated and apply to each, in turn, a reliable test reagent for those alkaloids. Having found and recognized one of them, the other half of the contents reserved may now be treated in the same manner through to the acid sulphate solution to avoid fats, precipitated again with ammonia, add chloroform until the precipitate is redissolved and separate the lower layer, evaporate to dryness and weigh. Twice this product will represent the amount of free alkaloid still unabsorbed.

A CHINESE HOSPITAL.

A Visit to the 'Tung Wah' or Native Chinese Hospital at Hong Kong.

COLIN A. CAMPBELL, M.D.,

Surgeon C.P.R. S.S. Tartar.

Escorted by a kindly Sikh policeman after a first ineffectual attempt to find the hospital with a jinricksha man, I again climbed the steep narrow street, turned up a cement paved lane and entering in an archway in a smooth stone wall stood in the courtyard of the Tung Wah. Broad stone steps flanked by great pillars of polished wood led up to the open temple-like rotunda with its floor of stone flags and walls of bare brick. On an altar at the farther end tapers were burning before the medicine joss.

Through the courtesy of Dr. Thompson, of the Government Medical Staff, I came furnished with an introduction to the Superintendent, Dr. Chung and found the latter in his office. While waiting I had an opportunity to note the evidences of modern life; the roll top desk, the telephone, the three or four busy clerks, the bright Oriental furniture and polished floor: within the doctor's private consulting room the decorations were still more European in character.

The Tung Wah Hospital is an institution managed by and for the Chinese alone, and offers them the choice of modern, or as it is called foreign treatment under Dr. Chung, or the old Chinese doctors' treatment. Fully two-thirds of the patients admitted prefer the latter and

this number includes many of the wealthiest Chinese and those best acquainted with foreigners.

Dr. Chung is a native Chinaman, educated at Tien Tsin. He spoke English fluently and showed a thorough knowledge of his profession but in conversing with him one does not notice the shaven head and long cue—he sees only a thoughtful earnest man of science.

The hospital wards are large and airy, each holding fifteen or twenty patients on as many hard board stretchers. The utter absence of mattresses and bed covers and the plain brick of the walls certainly give the wards a bare comfortless appearance, but in a climate of such intolerable heat plain matting makes about as comfortable a bed as it is possible to find. There is accomodation for one hundred and eighty patients in the hospital and it is usually crowded. Whole wards are filled with beri-beri, dysentery and malaria; and those under modern and Chinese treatment are indiscriminately in the same wards. There is a ward for incurables, always overcrowded, and another for the destitute, in which several emaciated beings stretched on the floor, a shelter for the night.

The hospital is composed of several low buildings and straggles up the hill after the most approved cottage plan. The Chinese dispensary where native medicines are prepared disclosed a room with walls hidden by drawers of drugs, and a row of small brick stoves for making decoctions, etc. A soft black mass of the size of a crab apple was shown me as a Chinese pill, but I learned that it was dissolved and taken, as they take all medicine, hot. Aromatics and bitters enter largely into their pharmacopoea, but they have no conception of the physiological action of any of the more active drugs or alkaloids. They know nothing of physical diagnosis, have no stethoscope and form their opinion of a patient's condition entirely by the pulse and *facies*. Their surgery can hardly be called more advanced for they never use the knife and know no other treatment for inflammation than plasters. I saw a fracture of both bones of the leg they had put up in a sort of a box-splint hollowed out of a solid block of wood. Some strips of bark, put next the skin for some supposed curative property formed coaptation splints, but immobility was not secured, the leg was not swung and the position was very bad. Dr. Chung tells me that the bones usually unite but only after prolonged periods and deformity is a very common result. There is little scope for clean surgery. Infected wounds, especially plantar abscesses are very common and from neglect frequently entail amputation. It is the dread of the knife that makes so many prefer the old Chinese treatment. Speaking of neglect, I saw one poor wretch with dysentery whose feet were horribly gnawed by rats he was too weak to fight off, before he was discovered and brought in.

Dysentery is very prevalent among all classes here and is frequently attributable to malaria. Want of opium accounts for a good many cases. Ipecac as a remedy he has found to be of no value with Chinese.

Malaria also is very common and the quartan type is not rare. Dr. Chung says, and quoted Dr. Bell of the Government Civil Hospital, that he has been able to find the plasmodium in only 3% of cases diagnosed clinically as malarial, and responding to quinine.

Two wards were filled with beri-beri, and showed this strange disease

in all stages of its various forms. It is almost confined to the poorest classes, particularly coolies, tailors and barbers. Females are practically exempt, although he described a puerperal form coming on seven or eight days after delivery as not uncommon. The mortality under good treatment, which included digitalis and strychnia, and plenty of albuminous food, meat and beans was about 30%. Six months was the average duration but this could be considerably reduced and all danger of relapse avoided if the patient were sent back into the country.

Plague was not supposed to enter the hospital, but that day, as frequently happened three cases had been brought in in a moribund condition and had died in the receiving room. In diagnosing plague he depended most on the extreme prostration with fever, injected conjunctivae, headache and a furred tongue with red edges and raised papillae. Buboes were not constant before the second or third day. Of six cases I myself saw at the mortuary one day, only one had a bubo mass large enough to be visible. The five others had died before the destructive process in the glands had gone past congestion and internal haemorrhage.

A CASE OF BRONCHO-PNEUMONIA TREATED BY OXYGEN INHALATION.

By J. T. FOTHERINGHAM, M.D., Professor of Therapeutics Trinity Medical College, and
A. F. STANTON, M.D., House Physician, Toronto General Hospital.

R. V., aet 11, admitted to Sick Children's Hospital May 6, 1900. He had been in the same institution three months previously under treatment for tuberculous arthritis of the knee joint. He had taken ill a week before admission, having caught a cold which did not improve under treatment.

CONDITION ON ADMISSION. Patient lies on the left side and prefers to have the head high and back supported by pillows. Respirations quickened (64 per minute) short and shallow. Dyspnoea very apparent. Lips and fingers cyanosed. There is clubbing of the fingers and toes. Expectoration profuse, muco purulent, at times tinged with blood. Pulse small and rapid (130 per minute). Temperature 104° F.

PHYSICAL EXAMINATION. Inspection, expiration is prolonged. There is some elevation of the chest wall, but little true expansion. Percussion, a dull area over the left upper lobe and over both bases. Auscultation, bronchial breathing over the left upper lobe and bases; elsewhere, over entire chest fine crackling and bubbling râles are heard. Palpation, vocal fremitus increased over left upper lobe. Treatment, calomel followed by salines, liq. strychn. m ii. every four hours; spts. frumenti ʒ i. every four hours; tr. digitalis m iv, ammon. carb. gr. i., vin. ipecac m vi every four hours. Milk diet.

Under this treatment for several days the patient showed signs of improvement. Expectoration was free and the lividity less pronounced than on admission.

May 9. Treatment, pot. iod. gr. i., creasote m v. four times daily.

May 11. Patient's condition not so favorable; lividity more marked. Some puffiness about the eyelids. Treatment, tr. belladonnæ in v. four times daily.

May 15. Condition more unfavorable; pulse rapid and irregular; area of cardiac, dulness increased showing dilatation of the right heart. Treatment, quin. sulph. gr. i. every hour for six doses; ammon. brom. gr. xii at 4 and 8 p.m.

May 16. Very irritable and restless; marked puffiness of the face; extremities show signs of commencing œdemia. Examination of urine shows the presence of blood and albumen. For some days at this period the secretion of urine was almost suspended. Treatment, morphia sulph. gr. 1-20 at 8 p.m.; tr. belladonnæ, half the previous dose.

May 17. Patient much weaker; the response to free stimulation is slight. At 2 p.m. commenced the continuous administration of heated oxygen. Liq. strych. m iv. every four hours; spts. frumenti ̄ ii. every two hours.

May 18. General condition somewhat improved; the lividity is less marked.

May 20. Patient distinctly better; pulse is improved in rate and tone. Urine is passed in larger amount; still contains hyaline and granular casts; blood in considerable quantity, epithelium from renal pelvis, pus. Treatment, creasote mixture discontinued; pot. nit. gr. ii.; pot. cit. gr. v.; mag. sulph. gr. xx. every four hours.

May 22. Improvement continues; apices of lungs clearing; smaller percentage of albumen in urine.

May 24. Left apex almost free from râles. Treatment, spts. frumenti ̄ ii. every four hours; liq. strych. m ii. every four hours. Oxygen now administered only half time.

May 28. Expectoration very free; cyanosis rapidly disappearing. Oxygen administered one quarter time.

May 30. Oxygen discontinued.

—A.T.S.

The main point of interest in this case is that the recovery from a condition ordinarily absolutely hopeless may, with an unusual degree of certainty, be attributed to one therapeutic measure. The inhalation of oxygen undoubtedly saved life, as asphyxiation was far advanced when the oxygen was begun, and with such condition of both lungs and kidneys only one event could be looked for. The rubber-tubing used had a flat glass mouthpiece in the end of it, which lay in the mouth even while patient was unconscious. Intermission of the oxygen caused prompt increase of the cyanosis for the first seven days of its administration. After this period, for four days longer it was given ten minutes out of every twenty, and for two days longer only five minutes in every twenty. The enormous expense to which the Trustees of the Hospital for Sick Children went to save the life of this little charity-patient is not entirely unique, but deserving of the highest commendation.

—J.T.F.

SELECTED ARTICLES.

NASO-PHARYNGEAL DISEASE IN PEDIATRIC PRACTICE ;
A CLINICAL STUDY.*

BY FRANCIS HUBER, M.D., NEW YORK.

Naso-pharyngeal disease in pediatric practice may be viewed from one of two standpoints—the specialist's or the general practitioner's. The former is apt to see the cases late, when serious secondary troubles may have developed ; the family physician, on the other hand, is more likely to be consulted at an early date. It is, therefore, important that the possible evil influences, direct or indirect, exerted by naso-pharyngeal troubles generally, and adenoids in particular, should be kept in mind—otherwise the treatment will be symptomatic and palliative, rather than radical and curative.

The symptoms vary with the individual. In one the brain receives the brunt of the attack, in another the chest, in others circulatory or digestive disturbances are manifested, and so on. In some the relationship is evident, in others a careful study only will clear up the case. Much may be accomplished in the way of prophylaxis by a correct and early diagnosis.

The following, taken from Jacobi's masterly, instructive and scholarly article, "Some Preventives," is suggestive and will serve as our text: "Nasal catarrh, with its hyperemia and soreness of the mucous membranes, predisposes and causes chronic hypertrophy, adenoid growths, tumefaction of submental and submaxillary lymph bodies, invasion of diphtheria and tuberculosis, and occasionally meningitis.†

It is not to be inferred from the above that adenoids are the result of repeated attacks of nasal catarrh in all cases. In numerous instances, particularly when occurring in families free from syphilis or tuberculosis, the lymphoid hypertrophies must be regarded as the local manifestation of a constitutional dyscrasia, to which the term lymphatism has been applied.

In quite a number the trouble is congenital or shows itself within the first few months after birth. As lymphoid hypertrophies in the upper and middle pharynx are frequent in children, it seems but logical to conclude that the enlargement of the pharyngeal tonsil in many cases is primary, and the catarrhal condition of the naso-pharynx, particularly when attended by a semi-purulent discharge, secondary—an effect and not the original cause. Our work will be facilitated and the ground cleared for subsequent discussion in detail, if at this point we refer to the

*Written for the "Jacobi Festschrift," and read by title before the American Pediatric Society, Washington, D. C., May 1, 2, 3, 1900.

†*Philadelphia Medical Journal*, Dec. 10, 17, 24, 1898.

functions of the nose and indicate thereby the anatomical relations of the naso-pharynx.

The main functions of the nose are :

(a) Respiratory,

(b) Olfactory,

(c) To give resonance to the voice,

(d) And to act as a regulator of the aëration of the middle-ear,

and, we may add, of the accessory air chambers or sinuses in the frontal, maxillary, ethmoidal and sphenoidal bones.

Two conditions, patency of the nose and throat, and a healthy mucous membrane, are essential to the proper performance to the work. Disease, with a greater or less degree of stenosis, shows its evil effects in many ways, to be discussed later on.

The naso-pharynx serves as a common area of air communication between five openings. The Eustachian tubes, one on either side, posterior to the nasal choanæ, ventilate the middle-ear. The acuteness of hearing depends upon the patency of the openings with free nasal respiration. The posterior nares also open into this space. They act as the normal channels for the passage of air through the nares to the lungs. Unobstructed nasal breathing is essential to the proper ventilation of the accessory sinuses of the frontal, superior maxillary, ethmoidal, and sphenoidal bones. Finally, at the lower portion, communication is established with the oro-pharynx.

As a pathological entity encroaching upon or invading this space, we frequently meet with a hypertrophied condition of the lymphoid structures (Waldeyer's Tonsillar Ring.) The symptoms are local and general. Some are caused by pressure, others are inflammatory in character, and many are the result of anatomical changes more or less permanent.

A discussion of the topic may appear trite to the specialist. In cannot be told too often to the general practitioner. Specialists, as a rule, do not see the cases early; the general practitioner, on the contrary, is frequently consulted at a time when a recognition of the trouble enables him to ward off many outward evil effects by proper local treatment, operative or otherwise.

Though naso-pharyngeal troubles are very common, in general practice, unfortunately, they are frequently overlooked, treated lightly, or dismissed with a few general directions. This is a serious error. Parents must not be led to believe that the child will outgrow the disorder, or that the symptoms will disappear about the time of puberty.

Advice of this sort, with neglect of appropriate measures, is certain to be detrimental to the mental and physical welfare of the patient. The popular belief, that operations upon the tonsils, etc., may be followed by defects in speech or imperfect development of the genitals, must be combated. Parents often refuse operative interference, until assured that no evil results will follow in this respect.

The family physician does well to remember that his duties are not confined to the treatment of an individual case or disease. Children under his care ought to be regarded as his wards from a medical standpoint. With a history of recurring attacks of nasal catarrh or mouth

breathing, the dangers should be made clear to the parents. Unnecessary delay or procrastination must be avoided.

The attendant should bear in mind that the effects are not altogether local. Disturbances, cerebral and nervous, due to the obstructed blood and lymph circulation at the vault of the pharynx and base of the brain, are frequent. Deformities of the chest, bronchial and pulmonary inflammations, are common, as are recurring attacks of catarrhal croup.

The general circulation is interfered with, respiration, digestion, etc., disturbed, and dyspnoea may be present. The poorly developed muscles, with lowered vitality in general, lead to chronic invalidism or render such patients an easy prey to acute disease.

In addition, enlarged lymph nodes at the angle of the jaw, repeated attacks of nose-bleed, acute and chronic bronchitis with emphysema and asthma, bronchopneumonia, large bronchial and mediastinal lymph nodes, are frequently secondary to a morbid state in the naso-pharynx. The paroxysmal nocturnal cough, quite common in children, distressing and alarming in character, disappears when the nose and throat are treated. The special senses, taste and smell, are more or less impaired in older children. The voice is altered and assumes a nasal character. Inability to pronounce the letters *m* and *n* and in some cases stuttering exist.

Disease of the eye may be reflex or arise from a direct extension of the process in the nose. Most commonly there is direct extension. Deformities in the nasal passages, acute or chronic catarrh, and adenoids give rise to affections of the lachrymal sac and conjunctiva.

Pupillary changes, photophobia, disturbed accommodation, strabismus, blepharospasm, etc., are at times of reflex origin. A normal mucous membrane is the best safeguard against the onset of a number of infectious micro-organisms. The invasion of diphtheria, tuberculosis, and now and then meningitis, is favored by an abnormal condition of the nasal and pharyngeal mucous membrane. The best preventive therefore, is to keep the mucous membrane in a healthy state. The eloquent appeals in favour of a routine naso-pharyngeal toilet have aided somewhat in popularizing the method. In the tenement districts, where most necessary, the precautions are imperfectly employed or wholly neglected. In this connection, it may be stated that, when a child with adenoids and associated nasal catarrh contracts diphtheria, an extensive surface is apt to be involved. The type will be severe, the progress correspondingly grave. On the other hand, children who "take cold" easily, who present but few evidences of lymphoid hypertrophy up to this time, often develop decided symptoms of obstructed nasal breathing after an attack of diphtheria, scarlet fever, or measles—at times, in spite of carefully conducted nasal toilet during the course of disease.

Small painless lymph nodes at the angle of the jaw, about the size of an almond, are common. Though frequently mistaken for tonsils, this is an error. They are due to infection from the naso-pharynx, and point to the presence of adenoids or a moderate degree of nasal catarrh. If an exacerbation of the latter takes place or an infectious disease is super-added, the nodes begin to swell and become more or less painful. Under appropriate treatment with nasal injections and cold applications exter-

nally, the process subsides and resolution takes place. In other instances suppuration occurs, either nodular, perinodular, or both. Now and then the capsule becomes thickened and the process remains quiescent; sometimes caseation takes place or calcareous or fibroid degeneration occurs. Other chains of lymph nodes may be involved, the process extending downward to the bronchial lymph nodes. The chief danger, however, lies in the tendency to become tubercular. In the latter case, the process may remain local, infect other lymph nodes and tissues in the vicinity, or general tuberculosis may result eventually.

Surgeons, recognizing the danger, advocate and practice the removal of enlarged or tubercular cervical lymph nodes. Yet adenoids and large tonsils have been allowed to remain, to serve as a nidus for subsequent infection. They, as well as the external lymph nodes, ought to receive surgical treatment.

A large proportion of ear troubles, from 60 to 75 per cent. according to different authorities, are secondary to diseases of the nose and throat.

Adenoids, in particular, constitute an all-important etiologic factor. In nearly every case, ear disease is certain to follow and no time should be lost in advocating their removal as a prophylactic measure. Clifford Allbutt says the very worst degrees of depressed ear-drums are found in those affected with large growths. Deafness, deafmutism, and ear disorders in general are benefitted at times by local treatment of the throat. In the course of the exanthemata and other infectious diseases, suppurative otitis with perforation is very apt to develop whenever a prior inflammatory irritation or congestion of the naso-pharynx is present. The danger is increased if the pharyngeal or faucial tonsils are hypertrophied. Otitic troubles arise in several ways.

The Eustachian tube may be occluded with mucus, the pressure of adenoids against the orifice may cause its obstruction, and thus interfere with the proper ventilation of the middle ear, or the catarrhal inflammation may extend through the tube and involve the delicate structure of the ear.

Trousseau, years ago, and others since then, have called attention to recurring attacks of erysipelas of the face in chronic aural or nasal catarrh with erosions of the skin. New outbreaks are avoided when, as a prophylactic measure, the primary condition of the ear, nose, or throat is relieved. A few cases of this kind have come under our observation at the Vanderbilt Clinic. The same is true of dermatitis and eczema under analogous conditions.

As to general diseases accompanied by local throat or nasal symptoms. In tuberculosis, syphilis, and rheumatism,* and in the acute infectious diseases, the general characteristics are such that the nature of the local condition does not remain in doubt for any length of time. Now and then some difficulty may be met with in diagnosis.

Anatomists have clearly demonstrated the direct lymphatic communication between the vessels in the naso-pharyngeal mucous membrane and those at the base of the brain. Bacteriologists have reported the presence of micro-organisms in the nose and throat similar to those found in many cases of meningitis. Clinical observations show that the differ-

ent varieties of meningitis are most commonly observed between the ages of three and five years, at a time when naso-pharyngeal troubles are very common. The intimate lymphatic connection referred to, and the identity of the micro-organisms in the naso-pharynx and those found in a large number of cases of meningitis, tend to explain the etiology of many heretofore obscure inflammations of the brain and meninges.

A general infection by way of the blood must be distinguished from a local infection arising from some region in the neighborhood of the skull. A frequent mode (beside the one referred to above) is through the Eustachian tube to the middle ear and thence to the cranial cavity. As a result, thrombosis, sinus-pyemia, inflammation of the meninges and brain, with or without abscess, are not infrequent.

Growth in general is more or less interfered with in many instances. Ewing, in an excellent article directing attention to the work done abroad, presented additional facts showing the diminished power of resistance, with the liability of sudden paralysis of the heart, in many of these patients.

Furthermore, a number of cases of sudden death during anesthesia for the removal of adenoids have been collected by Hinkel.

Deformities of the thorax, due to adenoids, are met with, though it should not be forgotten that other factors are usually associated. The worst cases occur in rachitic subjects, particularly when bronchitis and pulmonary inflammation have been of frequent occurrence. The deformities vary in degree from the flat chest of the milder to the "barrel-shaped" and "pigeon breast" of the advanced type.

In seeking an explanation, it may be interesting to refer to the effects of nasal obstruction upon respiration, and to note the difference in the physical character of the air when it reaches the lungs in a normal manner through the nares, or abnormally by the way of the oro-pharynx. Inspired through the nose, the air is warmed, filtered, and moistened; in addition, further modifications occur from an interchange of gases between the blood and the atmospheric air.

When breathing is carried on through the mouth, these changes do not occur, and the air not being filtered, warmed, or moistened, acts as an irritant. Consequently the delicate structures of the larynx, bronchi, etc. (rendered more susceptible because of the chronic catarrhal inflammation of the nose and throat), readily become inflamed. As the distal portion of the lungs do not expand fully under such conditions, the external atmospheric pressure being greater, the chest wall sinks in and deformities result. The degree varies according to age, the condition of the bony structure of the chest wall, the development of the muscular tissues, the presence of bronchitis and the amount of existing pulmonary collapse or deficient expansion. We are all perfectly familiar with the difficulty and discomfort experienced in breathing when afflicted with a

* Since the above was written, Dr. Packard, in the "Wesley M. Carpenter Lecture," discusses in an able manner "Infection through the Tonsils," especially in connection with acute articular rheumatism.

cold in the head. The respiration becomes labored, and the lungs expand imperfectly for the time being.

In the case of the infant or child, the condition is more or less permanent, depending upon the degree of stenosis and the presence of acute or chronic catarrh. The breathing is superficial and the effects are more severe and lasting. Let any one attempt the simple experiment of breathing through the mouth for a short time, he will quickly realize the discomfort and fatigue, the dyspnoea, sense of imperfect expansion, and the feeling of weight upon the chest.

In mild cases, in the young, the lungs expanding imperfectly, allow the thoracic walls to fall in, causing a shortening of the antero-posterior diameter. The chest becomes thin and flattened, the intercostal spaces are depressed, and the infra- and supra-clavicular regions retracted. The Funnel Breast (Trichterbrust), characterized by a funnel-shaped depression at the lower portion of the sternum, certainly, in some cases, is secondary to the nasal obstruction. It has been my good fortune to see a few in the process of development.

My experience accords with Osler, who says: "During inspiration, the lower sternum was forcibly retracted, so much so that at the height the depression corresponded to a well-marked Trichter-brust. While in repose the lower sternal region was distinctly excavated." A similar state of affairs was observed in an infant with a syphilitic affection of the nasal mucous membrane. The deformity disappeared as the nasal symptoms improved under anti-syphilitic treatment.

In marked cases associated with rickets, the chicken or pigeon breast is observed. The sternum is prominent, particularly at the junction of the first and second portion, the ribs project anteriorly, while laterally, above the diaphragmatic or rachitic groove, the chest is depressed, giving a triangular shape to the thorax. In advanced cases, the chest is almost fiddle-shaped. In a well marked instance in a child eighteen months old presented at one of our classes during the "Practical Course," it was surprising how quickly the deformity was remedied, when the patency of the naso-pharynx was restored. The "Barrel Chest" is not infrequent, and occurs in those who are afflicted with chronic bronchitis, emphysema, and asthma. The neck is short, and round shoulders with or without scoliosis may be present.

In the absence of other causes, Coolidge believes that some of the atypical orthopedic deformities may result from a lowering of the general nervous vitality, frequently seen in patients with adenoids. Bilhaut found voluminous adenoids in many cases of scoliosis, removal of which at an early date brought about cure. Whatever the relation may be, it is important to secure pulmonary expansion in such cases, as the cure or improvement of the scoliosis is facilitated by furthering the development of the muscles and establishing good nasal respiration.

A practical point in hastening the cure of empyema may be incidentally referred to in this connection.

In a few cases of empyema in mouth breathers, curetting of the naso-pharynx, by favoring pulmonary expansion through improvement in the

breathing, caused the obliteration of a small cavity or sinus, thereby avoiding a secondary operation upon the costal walls. In the same way, the associated lateral curvature rapidly disappeared when nasal respiration was established.

Snuffing in infants with retracted root of nose is of such evident import that even the tyro in medicine gives a correct interpretation. The nasal deformity should not be confounded with a similar state in cretinism and some forms of idiocy. The change in the appearance of the face, due to long-existing mouth-breathing, is characteristic, and admits of a ready explanation. The dropping of the lower jaw, due to a functional loss of tone in the muscles, adds to the length of the face, the latter appearing longer because of the deficient development of the superior maxilla.

The proper ventilation of the accessory sinuses or air chambers is interfered with by the naso-pharyngeal obstruction. As a result, the blood supply is modified, normal growth of the bones does not occur, and expansion is retarded. The anemia and mal-nutrition, in consequence of the accompanying digestive and circulatory disturbances, leave their impress upon the face and give the drawn appearance to the eyes and mouth. The facial muscles are poorly developed, and the pinched nose or distended *alæ* add to the deformity. These changes, taken in connection with the mental state, give rise to the characteristic physiognomy.

A high-arch palate, with narrowing of the transverse measurements of the jaw, presenting a pointed appearance in front, with resulting contraction of the alveolar process, crowding and even rotation of the teeth on their axis, is frequent. The absence of the support of the tongue and increased atmospheric pressure upon the roof of the mouth, in consequence of the buccal breathing, explain the deformity. The gothic-shaped palate in turn crowds the septum, causing a deflection, and thus adding another factor to aggravate the inconvenience of the original trouble.

the teeth show a tendency to early decay, particularly the molars. In some cases, stomatitis and gingivitis occur, persisting until the growths are removed. The breath is more or less offensive, the odor being caused partly by the bad teeth and partly by decomposed secretions, etc. Imperfect mastication, the rapid bolting of food, and the general anemia keep up and intensify the dyspeptic symptoms.

In younger children, particularly under a year, after exhausting disease with pronounced muscular weakness and relaxation, there is an additional danger, due to the tendency to falling back of the tongue and possible asphyxiation in consequence—particularly if the patient is allowed to sleep upon the back. Such cases must be carefully watched, and must be kept lying on the side. Strychnin and good diet soon restore the muscular tone.

Older persons frequently complain of shortness of breath. Talking, going up stairs, or rapid walking produces dyspnea and palpitation. A careful examination shows that the symptoms are due to the nasal trouble, and not to heart disease.

Naso-pharyngeal obstructions induce abnormal breathing, anemia, disturbed sleep and a variety of nervous manifestations. The disposition is altered, the children become fretful or sullen, the memory is defective,

and, apart from the impairment of hearing, such patients are inattentive, backward and dull.* In cases in which the growths have existed for a long time, the process may cause anatomical changes in the meninges and brain, with resulting idiocy.

Headaches, often of a low grade, limited to the forehead and temple, may be accounted for by the retention of morbid products and obstructed circulation. Attacks of night terrors, walking in sleep, morbid dreams, melancholia and other evidences of disturbed cerebral functions may occur.

The mental and nervous phenomena are of extreme interest and importance. The question has been studied by Wells in an able and exhaustive article (*American Journal of Medical Science*, December, 1898), from which the following is quoted:

"Since we are dealing especially with the psychopathic phenomena, how, we may inquire, can an obstructive lesion of the nose interfere with the cerebral functions? Briefly, by (a) alteration and impoverishment of the general, and secondarily of the cerebral, circulation, from the overcharging of the blood with CO₂ and the diminished supply of O, which are the necessary results of deficient aeration; (b) interference with the blood-supply of the brain by the lesion in the nose; (c) hindrance to the outflow of lymph from the brain. It has been shown that the subdural and subarachnoid lymph spaces are in direct connection with the lymph vessels of nasal mucous membrane. Guye held that aprosexia was owing to the interference with the lymph circulation, by reason of which the products of cerebral tissue metabolism are accumulated in the brain, producing brain fatigue or the so-called 'retention-exhaustion.' (d) It is barely possible that there may be some direct oxidation by the central nervous system, by means of the olfactory bulb (as in some animals) which function, if it exists in man, would be prevented by obstructive lesions of the nose."

Exceptionally a pure reflex case may present itself. In the vast majority, other causes exist, the removal of which yield brilliant results. In view of the marked improvement and entire disappearance of local facial spasms at times, following the relief of the naso-pharyngeal disease, some relation of cause and effect must be admitted. The deleterious effects of the nasal disorder upon the blood and lymph circulation in the brain, and the accompanying anatomical changes, are responsible in a measure, for the various neuro and psycho-pathic manifestations occurring in *neurotic* subjects.

Jacobi, in an article published in 1886, directed attention to "partial, and sometimes general, chorea minor from naso-pharyngeal reflex." During the past ten years, the writer has seen quite a number of cases (at the Vanderbilt Clinic) improve under local treatment directed to the naso-pharynx, arsenic being given at the same time, though arsenic and tonics alone failed to make much impression.

Nasal obstructions (inflammatory or otherwise) no doubt act as factors

* Ribot holds that *acts of attention* are accompanied by a temporary suspension of the respiratory rhythm. The air hunger, depending upon the presence of adenoids, therefore of necessity interferes with the psycho-physiology of the act of attention. In this way he would explain the mental state of such children.

in the production of asthma, in a number of cases—not, however, as the sole agent. A neurosis which remains active after the nasal trouble is relieved is generally found.

In the discussion of this part of our subject, three conditions must be considered: First, predisposition, varying in degree in different individuals; second, some abnormality or undue excitability of the mucous membrane in some portion of the air passages; and, finally, a distinct irritant, which in consequence of individual idiosyncrasy, is reflected to, and again from, the respiratory centre. The greater the predisposition, the less the exciting cause needs to be. The truth of this was infrequently exemplified in our experience at the Clinic. In numerous cases, the tendency to bronchitis was relieved by freeing the naso-pharynx. Yet the attacks of asthma would occur, sometimes less frequently; in other instances, no benefit resulted; now and then a cure was noted, probably in cases in which the predisposition was slight.

For a moment, attention will be directed to a brief study of the cases in which enuresis is observed. In some the incontinence is nocturnal, in a larger number it is both nocturnal and diurnal. A neurotic condition, with anemia and flabby muscles generally, is frequently found to be associated with the urinary difficulty. Increased thirst and polyuria add to the distress. As to an explanation, a plausible solution is offered in the mental state incidental to mouth-breathing. Apathy and listlessness, with disturbed intelligence and deficient innervation in general, are present—*conditions*, manifestly the result of the obstructed circulation in the blood and lymphatic vessels at the base of the brain and vault of the pharynx.

The higher inhibitory centres, for reasons given, do not act in a normal manner; the bladder reflex, consequently, is not respected, and incontinence follows. Furthermore, the frequent indulgence in water, to relieve the thirst caused by the parched condition of the lips and tongue, produces increased flow of urine, another factor in the etiology. Drugs are of very little service under such circumstances; to cure these patients, the pathological state in the naso-pharynx must be removed.

An attempt has been made to present the more important features. Much might be added. The instructions in the following, taken from the paper of Jacobi, are to the point. If carefully followed, many evils may be avoided and a great deal accomplished in the way of prophylaxis.

Jacobi writes:

"I have always made it a rule to keep all the integuments clean. At least once a day a physiologic solution of salt water is poured through the nares of every infant or child over whom I have control. Big adenoids should be removed, large tonsils resected. There is more danger in a dirty nose than in an unwashed face. Only do not be satisfied with merely ordering it. I have met many a 'trained' nurse who did not know how to inject or irrigate a nose. A mother or a child's nurse should be instructed by you personally how to do it. Here, as everywhere, when two do the same thing it is by no means the same. There are many cases of nasal diphtheria, such as are most likely to resist the influence of antitoxin, which are still spared a fatal termination by persistent and correct irrigation of the nares and naso-pharynx.

"Pure air and sunlight are indispensable to health. The air should enter the lungs by way of the nasal passages; 'And breathed into the nostrils the breath of life,' we find recorded in Genesis.

"There is more than a grain of truth in the aphorism. 'Shut your mouth and save your life,' found on the title page of Captain Catlin's celebrated pamphlet on mouth-breathing."

The homely, forcibly expressed dictum of Catlin must not be lost sight of. Give the little patients free nasal respiration, and give it to them early—the earlier the better.

Preventive medicine has done much to alleviate human suffering. Efforts in this direction have already borne fruit, and as a knowledge of etiology increases, advance in prophylaxis will keep pace

These assertions are particularly applicable to our subject. To sum up, we may add:

1. The removal of the lymphoid hypertrophies in the naso- and oropharynx, with the cure of the associated naso-pharyngeal catarrh, will restore the patency and permeability of the nose. If done early, many local pathological changes may be avoided.
2. The general health will be more or less improved.
3. The mental faculties and general intelligence will be improved.
4. Defects in speech and in hearing due to nasal troubles will disappear.
5. Deafmutism may be relieved.
6. The functions of taste and smell will be restored.
7. Reflex neurosis of various kinds will be modified or cured.
8. Nasal and supposed pulmonary hemorrhages will disappear.
9. Thoracic deformities will be relieved or cured.
10. The tendency to acute rhinitis, pharyngitis, laryngitis, bronchitis and pneumonia becomes less and less with the restoration of normal respiration.
11. The dangers attending the presence of enlarged cervical lymph nodes will be avoided.
12. The invasion of various infectious diseases is less likely when the nasal mucous membrane is in a healthy state.
13. The danger of meningeal infection from the naso-pharynx will be lessened.
14. Ear complications in general, and particularly those incidental to the infectious diseases, will be avoided or rendered less dangerous.--*Archives of Pediatrics.*

GONORRHOEA IN WOMEN.

DIAGNOSIS.—The diagnosis of gonorrhœa in women is much more difficult than in men, chiefly because a whitish, leucorrhœal discharge may be considered more or less normal in women, whereas in healthy men there is no urethral discharge.

The certain diagnosis of gonorrhœa in women depends very largely upon the demonstration of the gônococcus in the secretions. A profuse purulent urethral discharge is quite as diagnostic as it is in men, but

when one takes into consideration the fact that the acute urethritis is comparatively fleeting in its character, and that the disease may persist months and even years after all of these symptoms have completely disappeared, it will be seen that little importance can be placed upon this sign.

In securing the pus for examination the greatest precaution should be observed not to have it contaminated by other organisms. For bacteriological examination the vaginal discharge is almost valueless, because it contains, as a rule, such a large number of cocci and other bacteria. Secretions from concealed passages are the ones which are to be employed in a microscopical diagnosis. The urethra should be exposed, carefully cleansed with a mild disinfectant solution, and with the platinum loop the secretion should be withdrawn and placed upon a cover-glass: if there is no urethral secretion it may be possible to express a drop from Bartholin's duct. The cervix should always be examined, and to this end the Sims posture should be employed. Secretions obtained directly from the cervical canal are the most reliable, for when gonococci are demonstrated in them there is no longer any doubt as to the diagnosis.

For clinical purposes methylene-blue solution is a practical and easily manipulated staining fluid. The secretion may be spread out on the cover-glass or on a slide, the latter being usually the better. If it is very small in amount or rather thick and viscid, it may be diluted slightly with a drop of normal salt solution. After spreading it evenly, it is dried by passing it a few times over the flame of an alcohol-lamp or gas-burner. Methylene-blue solution is then dropped upon the slide and allowed to remain for from one-half to one minute, and is then carefully washed off in running water and dried with bibulous paper. It is not necessary to protect the stained area with a cover-glass, for it may be inspected directly either with a high-power or (which is always preferable) with a 1-12 oil-immersion lens.

To be certain of the diagnosis, the gonococci must be found inside of the pus-cells. While the presence of typical biscuit-shaped cocci in pairs free in the secretion without the association of other bacteria is very significant, it is nevertheless unsafe to make a positive diagnosis. One should never be content with one search, for gonococci may be found in a certain number of cases only after repeated examination. In one instance at least twelve negative examinations were made on different days before the gonococci were at last found.

In some instances in which the gonococci have not been found even after repeated examination the symptoms have been so characteristic that a tentative diagnosis of gonorrhœa has been personally made under the assumption that the micro-organisms were concealed. John G. Clark (*Amer. Jour. Med. Sci.*, Apr., 1900).—*Monthly Cyclopaedia*.

THERAPEUTICS OF UROTROPINE.

The important place which urotropine has attained in genito-urinary surgery is exemplified by the fact that it was made the subject of a special paper by Dr. E. L. Keyes of New York (*Philadelphia Medical Journal*) at the recent meeting of the Congress of American Physicians and Surgeons. Among the instructive cases reported by the distinguished author, there was one of persistent anuria following external urethrotomy which was at once relieved by the use of the drug, the symptoms again appearing when it was discontinued. Dr. Keyes always uses urotropine when urinary chill is present, or is threatened, and it appears to be almost a specific in acute catarrhai pyelitis. Large doses may be necessary at first, these being followed by long-continued smaller doses. As a prophylactic against urinary chill, urotropine is highly recommended. Attention is called by the author to the fact that in some instances the drug caused dysuria, or that urine passed during its administration had an irritating effect on wounds with which it came in contact. This, it seems to us, is only likely to occur under the use of very large doses, and especially where the patient does not receive an adequate amount of water, so that the urine becomes highly concentrated. Dr. Keyes, however, instances a case of enlarged prostate in which $67\frac{1}{2}$ grains were given daily for months, and the patient rendered perfectly comfortable. According to Nicolaier, who has made the most thorough experimental and clinical study of urotropine, a daily amount of 15 to 22 grains is usually sufficient to obtain the desired therapeutic effect, and he advises that each dose should be dissolved in at least one-half pint of water. If larger doses are employed the quantity of water should be correspondingly increased.—*Southern Practitioner*.

ANTIPYRIN IN VESICAL IRRITATION.

Du Chastelet has performed lithotomy painlessly, after a rectal injection of antipyrin. It seems that this substance injected into the rectum exerts a marked local anesthetic action upon the vesical mucous membrane, permitting of manipulation of the viscus, and even incision of the membrane, without pain.—*St. Louis Med. Review*.

SOCIETY REPORTS.

CANADIAN MEDICAL ASSOCIATION.

At the City of Ottawa on the 12th, 13th and 14th days of September 1900, took place the thirty-third annual meeting of the Canadian Medical Association. Dr. R. W. Powell of that city occupied the chair and it was under his presidency the meeting convened.

The General Secretary read the minutes of the last meeting in Toronto, which were adopted.

The Present Status of the Eliminative and Antiseptic Treatment of Typhoid Fever.

This paper was read by Dr. W. B. Thistle of Toronto. It is now some seven years since Dr. Thistle introduced this plan of treatment to the profession. He thought that this plan of treatment of typhoid fever had time and again been misrepresented by Professor Osler and others, as he had never held to the opinion that the eliminative and antiseptic plan could rid such organs as the liver and spleen of the bacilli lodged in them. When once the typhoid bacilli gain access to the intestinal tract, the multiplication of them occurs with extreme rapidity and the intestinal contents teem with countless numbers of them. These are not confined to the intestine, but are to be found in the walls and in fact in almost every organ of the body. He was of the opinion that the draining of the intestinal walls following upon the action of a purgative such as calomel or magnesium sulphate would tend to get rid of some of these bacilli in the intestinal walls, but he did not claim that it would effect their exit from the liver etc. The treatment, Dr. Thistle thought, had been imperfectly applied in many instances without a clear conception of its underlying principles. Dr. Thistle has never had a single hemorrhage under this plan of treatment, what hemorrhage occurred having been always very slight, and he has also seen very few perforations,—and twenty per cent of the death rate is from hemorrhage and perforation. In Toronto this plan of treatment is universally adopted. The statistics at the Toronto General Hospital show, that from 1893 until the present time, there have been 833 cases in that institution with 56 deaths, a mortality of 6½ per cent.

In discussing this paper Dr. McPhedran said that he had been watching Dr. Thistle's work in this direction from the time of the appearance of his first paper on the subject, but could not agree with all his conclusions. He did not think that this plan of treatment lessened diarrhoea, tympanites, fever or delirium; and considered that Dr. Thistle was harboring the idea that purgatives in typhoid were a new discovery with him; this was not so. Twenty-five years ago Dr. McPhedran gave these for the first ten days at least. In addition to this he used to give carbolic

acid and iodine, and in a certain class of cases he thought he had the exact treatment. Another class would then come along in which that treatment had no effect whatever. He considered that the general toxæmia that existed, could not be eliminated through the bowel. It had to be done through the kidneys and skin.

Replying to the criticisms of his paper, Dr. Thistle emphasized the fact that he was *not* trying to eliminate bacilli from the glands. In clearing out the bowels, he was trying to eliminate *toxins* from the body and not bacilli.

A Case of Sarcoma of the Right Nasal Fossa with Acute Sinusitis and Orbital Cellulitis.

This paper and case was contributed by Dr. P. G. Goldsmith, of Belleville, Ontario. The patient was a man of thirty-eight years, a farmer, with an unimportant family and personal history. He consulted the doctor on the fourth of August last with severe frontal headache and double vision. The nasal fossæ were examined and growths found in the right one which along with some bone were removed. Then swelling and pain in the right eye began, so that it was seen to project downwards, outwards and forwards. The right nasal fossa was curetted and the tissues sent to Professor Anderson, of the Trinity Medical College Laboratory at Toronto, who pronounced them sarcomatous in their nature, of small round cell variety, having the walls of the blood vessels thin and poorly developed. The discharge from the nostril had an odor similar to that proceeding from cancer of the uterus. Up to ten years ago Bosworth had collected forty of these cases.

Dr. R. A. Reeve stated that a number of years ago he had presented a paper on this same subject to this Association. He directed attention to the importance of examining the naso-pharynx in diseases of the orbit. He recited a similar case to Dr. Goldsmith's. In this case there was little pain, but an examination of the nose revealed the tumor.

President's Address.

Dr. R. W. Powell, the president, delivered his address on the afternoon of the second day when the Hall was well filled. He first recited a few reminiscences when on former occasions the Canadian Medical Association had convened in the Capital City, in 1871, 1881, 1889 and in 1893. He made a reference to the South African war in order to point out the unsatisfactory condition of affairs which permitted other colonial surgeons from Australia and New Zealand practicing their profession in that land without hindrance whilst Canadians were debarred from the same privileges. An earnest and united effort on the part of the profession throughout the whole Dominion of Canada in an endeavor to bring about inter-provincial registration, would facilitate matters in the direction of securing these privileges for the Canadian profession in other parts of the British Empire. The subject of tuberculosis was touched upon lightly to the extent that he favored the ordinary preventive measures and the prevalent and present established manner of treatment by sanatoria. He then dealt with a very important matter relating to a Medical Defence Association, favoring the formation of such and requested the Association to appoint a Committee to look into the subject and report at the next meeting.

Some of My Experiences in the South African War.

Surgeon Lieutenant-Colonel, George Stirling Ryerson, then addressed the Association upon this subject. He dealt first with the experience of modern bullets gained in this campaign. The very latest returns show that 986 officers and 11,701 non-commissioned officers and men had been wounded, of whom only 732 have died of wounds received in battle, which is to be ascribed to the aseptic character of the bullet and the prompt attention and antiseptic treatment. Dr. Ryerson then dealt with the wounds caused by these bullets. Referring to poisoned bullets being used, this was not the truth, as the tarnish or verdigris probably accumulated in transit through the barrel. He also doubted the fact of explosive bullets being used. The Boers made use of thousands of Martini-Henry, a heavy bullet, which caused great destruction of soft parts necessitating amputation. There were few amputations in this war. He quoted Kendal Franks who had performed 20 amputations in 2,000 cases. Whilst abdominal section in wounds of the abdomen was mainly inadvisable, he saw one case where the results were excellent. He spoke highly of the magnificent work of the R. A. M. C.

At the conclusion of this able address, Dr. T. G. Roddick, M P., highly complimented Dr. Ryerson for his remarks and further spoke of his great sacrifices in proceeding to South Africa at his own expense in order to carry out the work of the Red Cross Association. While in England recently, Dr. Roddick stated, that he made it his special business to enquire of returning Canadian soldiers as to the hospital management in South Africa, and although he had spoken to many of these, he had failed completely to find a single Canadian, who had anything but praise for the hospital arrangements in that country.

Our Race and Consumption.

Sir James Grant, Ottawa, contributed a very able paper on this subject. He considered it an important fact and one worthy of consideration that races had been born on this continent, had lived and died and entirely disappeared leaving mounds in the west and other traces in Florida and elsewhere of their undoubted existence; and that thus far there was no information as to the exact cause of the disappearance of these races. He thought it remained for the Anglo-Saxons to see whether they will prove more successful than their predecessors in establishing themselves. He referred to the loss of 3,000 lives in the Province of Ontario in 1898 by consumption alone, and deplored the fact that the people were not as yet alive to their danger. Sir James endorsed the Legislation passed at the last session of the Ontario Legislature designed for the purpose of assisting municipalities in the erection and maintenance of sanatoria for consumptives.

Recognition and Management of *Tabes Dorsalis*.

Dr. Allan McLane Hamilton prepared this paper which was read by the president at the request of the meeting. Syphilis as an etiological factor was not referred to by the early writers on this disease. While some would attempt to divide the symptoms of the disease into the leg

and eye types, the writer would consider that to be unwarranted. He considered there was a close resemblance or relationship between the different forms of cerebro-spinal sclerosis. There was no disease of the nervous system which had drawn forth so many plans of treatment; and but little or no good had resulted from any one thing. Most tabetics are favorable subjects for expectant treatment, and many derive temporary benefit from some new drug. Looking back over a number of years, he finds that most good has been accomplished where little or no medicine has been given. He has found rest by suspension and persistent cauterization of the back, good treatment. In the opinion of the writer, syphilis cannot be traced in more than fifty per cent. of the cases. For the arthropathies there is little to be done. Perforating ulcer is a rare feature of locomotor ataxia; and most obstinately resists treatment. He has seen three cases of this unusual condition in ataxics; and the ulcer rarely exceeds two or three centimeters in diameter. One authority mentions five cases cured by means of nerve stretching. Throughout the course of the paper, numerous cases were cited with their symptoms and treatment.

The Physician's "Vaster Empire."

This paper was contributed by Dr. John Hunter, Toronto. It dealt with sanitary science, education, social purity and medical missions. Referring to sanitary science, he entered a plea for the broader and freer application of the principles of this branch of medicine, in the building and construction of our homes, schools, churches, theatres, etc. No dwelling-house should be constructed except under the supervision of an architect and a physician versed in the principles of sanitary science. In the matter of sanitary science, architects had improved wonderfully during the past ten years. Another important question was that of our educational system,—the mental and physical development of our school children. The best way to secure physical vigor and high mentality was surely within the province of the physician to grapple with and study. In all forms of social purity, physicians should speak *ex cathedra* against every form of vice and immorality. The boys and girls of the family should be enlightened as to their sexual proclivities at proper periods by their fathers and mothers respectively. In medical missions, he referred to the vast field for medical missionary work in foreign countries.

Address in Surgery—Tuberculous Lesions from a Clinical Point of View.

At the evening session of the first day, the president introduced Mr. Edmund Owen, of London, England, who proceeded to deliver the Address in Surgery. He stated at the outset that the subject of his address would deal principally with tuberculous lesions as the surgeon meets them day by day in the hospital wards, in private practice and also in the operating theatre. Referring to the pathologists, he considered their thought to be only of the dead tissue, whilst the surgeon sees the human tree during its life but rarely follows it after death. The student does clinical and pathological work at different times; and he is enabled to follow the case straight from the ward to the laboratory. He consider-

ed that study of the fresh specimen was the best; for the specimen taken from formalin was no more like the condition than canned salmon was like fresh-run fish. He would not hinder experimental research work; it was absolutely necessary. The life of a man was of more value than a sparrow or many guinea pigs. It would be almost impossible to overestimate the direct value of experimental laboratory work. Strumous and scrofulous are now terms devoid of meaning and we now call tubercle by its proper name. There are three great factors in connection with tuberculosis which the public must be made acquainted with: 1—The disease is communicable; but the public must be allowed a little time before they accept this statement and fact; 2—The disease is preventible; this follows almost as a corollary to the first statement; 3—The disease is curable. Years ago, one, the subject of tuberculosis was regarded as well nigh hopeless; but now we do not consider it of the untractable nature that it was formerly considered. Tuberculous lesions are exactly what they used to be; and Mr. Owen has worked at the largest children's hospital in London for over a quarter of a century. We now take a much more hopeful view of these lesions. Many of you have studied tuberculous lesions under these skies and also in the mother country. Do you find that the tuberculous lesions are the same in both hemispheres? One rarely hears now of the *vis medicatrix naturæ*; surgery has rendered it superfluous. All have noticed cases of old-standing hip joint disease where in time the boy actually grows out of his trouble. This may be a popular superstition, but like most erratic beliefs, it is founded upon a stratum of truth. In children these chronic diseases are always tuberculous. Where chronic abscesses occur, it will not do to open and drain, but they must be scraped out,—their unhealthy lining destroyed. In the treatment of these diseases, the learned surgeon stated that he had failed to find any virtue whatever in the employment of iodoform. It is an irritant and a poison, and it is apt to be septic as germs can grow on it. Mr. Owen condemned the employment of complicated apparatus and also the forcible correction in cases of spinal deformities. He considers that this deformity does not lend itself to operative treatment. There may perhaps be a small class of cases where it may eventually be found applicable, as where bone or organized inflammatory deposits press upon the cord so that the patient has lost movement in the lower extremities. The plaster of Paris jacket must be held responsible for much of the deformity of Pott's disease. The proper treatment of these cases is rest in the horizontal position, with plenty of good fresh air and sunlight. At the conclusion of his extremely able and instructing address the thanks of the Association were moved in a complimentary speech by Professor Shepherd, of Montreal, and seconded by Professor Cameron, of Toronto, put to the meeting by the president, unanimously carried amidst great enthusiasm, and appropriately presented to Mr. Owen by Dr. Powell. Mr. Owen made a happy reply.

Excision of the Knee Joint in Tuberculous Disease.

Professor Primrose, of Toronto University, minutely described Kocher's method of dealing with tuberculous disease of the knee joint.

and recited the histories of a few cases in which he had obtained excellent results where this operation had been employed.

Recent Pathologic Studies of the Blood.

Dr. L. H. Warner, Brooklyn, N. Y., contributed a scientific paper with the above title. At the outset he asserted that he believed there was a necessity for experiments for the progress of pathology. His experimental researches were directed along three lines of enquiry, viz: Experiments, observation, and individual observation at clinics in hospitals. He considered that the examination of the blood in most cases was of more importance than an examination of the urine. Dr. Warner gave the formula of a new staining solution which he had found very practicable—The blood specimen should be prepared in the regular way. The slides are heated in a hot oven to 98 degrees. Immerse for one minute in a one per cent. aqueous solution of methylene blue, washing in water, then in a one per cent. alcoholic solution of eosin, washing again with water and then in a one per cent. solution of Bismarck brown. Dr. Warner's paper was illustrated with suitable diagrams.

Some Experiences in the Treatment of Hernias.

Dr. F. J. Shepherd, of Montreal, contributed the first paper at the morning session of the second day. He stated that it was now some twenty years ago since surgeons began to perform these operations by the open method. Older methods in vogue were touched upon and described; and he instanced one very large hernia which had come under his observation then, where the man could not put his trousers on. The methods of operation are almost as numerous as surgeons, but there are certain general principles underlying all operations: 1—The necessity for excision or obliteration of the sac; 2—Closure of the canal; 3—Union by first intention. Some also hold that alteration in the direction of the canal is necessary. The operation performed by Dr. Shepherd is Bassini's, but even with it he is not always successful. He has used all kinds of sutures. Absorbable sutures are the best and if antiseptic they are to be preferred. A suture that will last for three weeks is all that is wanted. He has used chromicized catgut now for some time. Professor Shepherd never washes out the wound and thinks it better to dissect out the sac with the knife than to tear it with the fingers. He never uses a drain. For the past two years he has used rubber gloves in all his abdominal work and he considers that he has got better results since beginning their use. In these operations the mortality is practically nil. Operations on children are now our most successful cases; formerly they were not advised except in strangulated cases.

Dr. Laphorn Smith discussed this paper and the cases described, although his experience lay mostly in ventral and umbilical work. In some of these he had seen them so large as to require twenty stitches. During the past two years he has abandoned silk and resorted to catgut, chromicized, which he always prepares himself.

Dr. Shepherd stated if there was any oozing in the wound he would pass a probe in between the edges to let out the accumulated serum. This

he finds to be quite efficacious, as then you minimize the chance of the introduction of any germs from without.

A Case of Syphilitic Gummata of the Spinal Cord successfully treated by enormous Doses of Iodide of Potash.

The history of this interesting case was reported by Dr. F. W. Campbell, Montreal. It occurred in a man of highly neurotic temperament who a short time before the onset of symptoms of a definite character, had suffered from repeated attacks of insomnia of a very aggravated character. When this sickness began, there were noticed retention of urine and loss of power in the lower limbs. The patellar reflex was about normal. The loss of power in the lower limbs was absolute. The pulse varied from 80 to 96; the temperature never above 99. The stomach remained in fairly good condition all the time. A consultant from New York was brought on and a diagnosis established of tumor of the spinal cord situated about the first lumbar vertebra which might be sarcomatous or syphilitic. The advice of the consultant was to give 500 grains of iodide of potash per day, commencing with drachm doses three times a day. Dr. Campbell detailed minutely the daily history of the patient while getting him under the large dose and then again whilst it was gradually being withdrawn. The patient is alive to-day and in good health, having recovered complete control of his lower extremities.

Address in Gynecology.

Dr. William Gardner of Montreal delivered a very practical address on the mistakes in midwifery and also in gynecology. He stated that we often learn more from our mistakes than from our successes. Correct and accurate diagnosis depends mainly upon our sense of touch, which can only be attained by long and patient practice. He referred to the advantages of examining the patient on a plain table instead of on a couch or bed. The patient's rectum should always have been emptied before presenting for examination. As for the bladder, it is best for the physician to empty that viscus for himself, per catheter, when the patient is on the table, as in this way you will be able to notice any discharges etc. That the physician will have to do this often is quite clear from the fact that there are many women of a nervous temperament who would not be able to empty the bladder voluntarily in the physician's office. Another advantage of doing this for yourself is that you get an uncontaminated specimen for examination. In cases where tension is present in the abdominal muscles, if you make a series of circular movements over the lower abdomen, gradually narrowing your circle, you will be able to overcome whatever rigidity there may be present. Dr. Gardner urged caution in the use of the uterine sound. He rather considers it a dangerous instrument, and that its use ought to be extremely limited. He holds the opinion that many women have lost their lives through this instrument. Then there is the danger and risk of infecting and injuring the uterine canal. The uterine sound is a great deal too much employed by the general practitioner. Mistakes in diagnosing displacements of the uterine body, he considers the most common. The uterus is a very movable

organ and a distended rectum or bladder may cause it to be diagnosed as a retroversion. Then it is important to remember that it may be displaced through acts of coughing, vomiting etc. In all examinations of the pelvic organs, Dr. Gardner has made it a point to examine the position of the kidneys as well. Referring to examination by the Sim's method, it is necessary to have the patient in the proper position; and if you have not got a Sim's speculum, a bent table fork or the finger of the opposite hand may be used to distend the perineum. Mistakes are often made in the diagnosis of pregnancy; but still the patients are few in whom the diagnosis cannot be made by careful examination of history, signs etc. Many women are probably inaccurate as to date. Dr. Gardner illustrated his points as he proceeded by reciting cases. One in particular he instanced where he once found a woman in his office on her hands and knees in the throes of a twin pregnancy, which a fellow practitioner had failed to recognize and had tapped the gravid uterus and had drawn off a quantity of the liquor amnii. He also referred to the mistakes made by himself as well as by his brother practitioner. The close of the paper referred to an interesting account of the mistakes which had occurred in diagnosing extra-uterine pregnancy. The Association voted him an unanimous vote of thanks for his exceedingly practical paper.

An Unnoticed Factor in the Production of Abdominal and Pelvic Disturbances in Women.

Dr. Clarence Webster, Chicago, contributed an original paper on the above subject. Symptomatology in women, he said, was often overlooked by the general practitioner. The question of the moral relationship of the abdominal and pelvic contents was dwelt upon and then he proceeded to account for inter-abdominal pressure. He held the view that the pelvic organs as well as the abdominal were to a large extent held in their respective positions by reason of the pressure of the abdominal and pelvic walls. He stated the average sp. gr. of the viscera to be a little more than that of water; the liver was 1.5 sp. gr. He maintained that there was no proof that the mesenteries acted as constant supports or were ever meant to be such. The main factor in restraining the viscera is the strength of the abdominal wall and pelvic floor. Local weakness of the abdominal wall has been fairly well described under hernia; while general weakness of the abdominal wall has been described as pendulous belly. General weakness in his experience is an exceedingly rare condition. As to the question of etiology, the condition is found in women who have borne children; and so, on examination of the great majority of women, there is found some degree of separation of the recti muscles in the region of the navel. All evidence later on may disappear, but permanent widening remains. The results of all this is unavoidable enteroptosis; and this is generally found in women who have been addicted to the pernicious habit of tight lacing. A very common displacement seen is that of the right kidney. Dr. Webster dwelt upon the diagnostic symptoms of these conditions and then proceeded to describe the operation he performs for their relief. This consists in bringing the edges of the two recti muscles into apposition. He first performed this operation

in Nov. 98. Since that time he has operated on forty-one cases and the results have been most satisfactory in all.

Mr. I. H. Cameron took exception to the word "unnoticed" in the title of Dr. Webster's paper, as he thought that this was not an unknown factor in the production of the conditions mentioned in the paper.

Dr. W. S. Muir, Truro, N. S., asked what effect leaving off the use of the binder after confinement had to do with the production of these conditions.

Dr. Webster held to the opinion that this had not been noticed except by himself and challenged Dr. Cameron to produce evidence to the contrary. The absence of the binder, in his opinion, had not made any special difference.

Address in Medicine.

This was delivered by Professor Shattuck of Harvard, who said in his opening remarks that the advance in knowledge had brought about our relation to things in general. There is noticed at the present day a subdivision in labor in every branch of industry. As a consequence, specialization has taken place in the science and art of medicine. In specialization lies the cleavage between medicine and surgery; and no where has the line been more closely drawn than in England. Anesthesia greatly enlarged the bounds of surgery. Twenty-five years ago there was not a pure surgeon in America. Bellyache is now a surgical disease. The heart is practically the only viscus which remains the exclusive property of the physician; and he was not so sure that even this organ would soon be attacked, and we might yet hear of suturing of the mitral valves. In this country the general practitioner is clinging to obstetrics for family practice. In some of the larger centres, there is now even a tendency to specialism in obstetrics, where the specialist will preside at the accouchement, and the family practitioner then step in to oversee the attendance throughout the puerperium. Pure gynecology scarcely exists to day; and pelvic tinkering is suffering from a rapid decline. The great bulk of major gynecology is nothing more than abdominal surgery, which properly belongs to the general surgeon. Gynecologists should study general surgery and become general surgeons first. The field in medicine is so large that no one man can grasp it all in a lifetime. Other specialties were also referred to, such as neurology and dermatology. The desire on the part of some to escape the hurly-burly of general practice may be a cause in throwing them into special lines; and then there is the fact that special knowledge draws larger fees. Ophthalmologists get more for removing a speck of dust from the eye than the general practitioner. When we have specialists for diseases of the young, why not also have a specialty for diseases of the old. In the belief of the distinguished professor from Harvard, specialism had come to stay. The gathering was exceedingly delighted with the deliverance of Dr. Shattuck and at the close voted him a cordial vote of thanks, to which he made an appropriate reply.

Gastric Hemorrhage.

Dr. George E. Armstrong of Montreal contributed this paper. He believed there was a fairly well determined field in which surgical inter-

ference may be of use in hemorrhage of the stomach. Hemorrhage occurs in fifty per cent. of gastric ulcers and is fatal in eight per cent. Cases are arranged in two groups, the acute and the chronic. Rodman has reported thirty-one operations for frequently occurring or chronic hemorrhage, with six deaths. Dr. Armstrong has operated five times for gastric hemorrhage, one being a chronic case. In one of these the patient was getting along nicely after the operation when she expired suddenly; and on a post mortem examination being made, thrombi were found in the branches of the pulmonary artery.

Some cases of Stomach Surgery — Gastrostomies, two cases; Gastroenterostomies, two cases; Pylorotomy.

Dr. A. E. Garrow, Montreal, reported these cases. In one patient operated on, the patient was fed before he left the operating table. Another, a woman of fifty years who had a persistent hacking cough had gastrostomy performed and discharged able to feed herself through a tube. In another case, in a man aged 38 years, who had vomiting and blood in the stools, the patient had acute pain suddenly and a pale face. Duodenal perforation was present; and when the abdomen was opened gas escaped from the incision. When discharged on July 24th last, he was feeling well. Six cases were reported.

The modern treatment of Retroversion and Prolapse of the Uterus.

This was the title of an able paper presented by Dr. A. Laphorn Smith. It referred to the proper and most successful management of procidentia uteri in elderly women between seventy and seventy-five years of age,—a most pitiable condition. Except for this trouble she may be otherwise in excellent health; the perineum, however, is so relaxed that no pessary will remain in place. Then the majority of these cases had an ulcerated cervix. After confinement the uterus remained large and the pernicious habit of keeping women too long on their backs has a tendency to produce the backward displacement. Dr. Smith feels certain that women who have been relieved of this distressing condition will have little difficulty in persuading others to avail themselves of the treatment. He removed a woman's uterus a few months ago, which had been out of her body for twenty years, and the woman now assures him that she feels like a young woman. In correcting this deformity Dr. Smith makes a small incision in the abdomen and performs ventro-fixation. After that the vaginal canal is narrowed by a large anterior and posterior colporrhaphy. In selected cases he also amputates the lower half of the organ, and then stitches the vagina to the upper half. He considers ventro-fixation, if properly performed, a most reliable means of fixing up the uterus. The operation has given him the most complete satisfaction of any operation he has ever performed, especially when combined with amputation of the cervix and posterior colporrhaphy.

Gasoline as a Surgical Detergent.

Dr. Bruce L. Riordan, Toronto, contributed an interesting paper on this topic. With this, the dirty, greasy hands of machinists, who are the subjects of injuries in these parts can be effectively and rapidly cleaned

without the ordinary brush and soap and water. It is far better for this purpose than any method heretofore devised for cleansing. He now constantly carried a small bottle of gasoline in his surgical bag. A report from Dr. Wm. Goldie, Toronto University, showed its effect upon germs and germ life, a report which would conduce to its employment as indicated. One word of caution was thrown out by Dr. Riordan in its use: as it is a highly inflammable substance, it should not be used in any quantity near an exposed light; and then it is painful in the eyes or ears. It is also useful in cleansing sutures of accumulated serum, blood and dressing powder as it frees these particles and enables one to locate the stitches easier and quicker.

Dr. J. C. Mitchell, Enniskillen, Ont., stated that he had tried gasoline recently as a detergent in two very severe threshing-machine injuries, where the parts were all smeared over with oil and grease and dirt; and it was very satisfactory, as he was able to get perfect cleanliness in a very short time, both wounds healing by first intention.

Dilatation and Prolapse of the Stomach.

Professor Alexander McPhedran of Toronto University presented this paper, which dealt principally with prolapse. This condition rarely occurs alone, but is associated with prolapse of other abdominal organs. There is generally present as well, some degree of dilatation; and the abdomen may be prominent or flat, or even retracted. The case of a man aged fifty-one years was referred to, a manufacturer who had been ailing for two or three years. The stomach was below the umbilicus. He was directed to massage the abdomen very thoroughly and to practise abdominal gymnastics. Through this treatment, combined with dietetics and some strychnine, he has been restored to health and able to resume business. Another case of a woman aged thirty-five years was reported. This woman had been the subject of recurrent attacks of vomiting for two years. The symptoms were detailed; massage and abdominal gymnastics ordered with satisfactory results. The different ways of examining the stomach were described; and a change of scene in treating these patients was most beneficial.

Sir William Hingston discussed the paper at some length. He thanked professor McPhedran for having brought before the association so valuable a contribution, so interesting a subject. He said that as a surgeon he, Sir William, was reluctant to part with anything which might possibly belong to surgery,—but dilatation and prolapse of the stomach he thought properly belonged to medicine. The stomach in cases of dilatation is not usually the sinner, but the sinned against; and one must look for the cause of dilatation rather to the mouth and to the faulty mode of dealing with the food when there than to any viciousness in the organ chiefly affected. The common causes of dilatation of the stomach in his opinion are in brief, eating too much, eating too frequently, eating too fast, eating too great a variety of things (often incompatible with each other), gratifying the palate rather than supporting the strength, and lastly, drinking too much at or near the time of eating.

Physical Training: Its Range and Usefulness in Therapeutics.

Dr. B. E. McKenzie of Toronto gave a very interesting account of the methods employed by him in correcting deformities in his orthopaedic hospital at Toronto. The paper was illustrated by lithographs showing improvements in spinal deformities after physical training in the direction indicated. The paper embraced the results of his observations for thirteen years past; and was ample justification of the benefits derived from gymnastics in the correction of lateral curvature, club feet, etc. He had also found physical training valuable in hysteria and chorea, especially the former.

Inter-Provincial Registration.

Dr. T. G. Roddick, M.P., read the report of the committee having this matter in hand. A new feature to be incorporated in the measure was that of allowing the homeopaths representation on the proposed Dominion Council, as according to the law of Ontario, these had their vested rights in that province, and so must be accorded similar interests in any proposed Dominion Council. These will be allowed three representatives, which will be equivalent to the representation from any one province of the Dominion. Their term of office will be for four years. Homeopathy, however, as such, will not be inserted in the measure, but will be classified under, "any other school of medicine having legal recognition in any of the provinces of Canada," as the British Medical Council would not recognize any such body. Dr. Roddick stated that the Bill would be introduced at the next session; and advised the members of the committee from each province to bestir themselves before their respective provincial parliaments, as these bodies must sanction the measure before it can be finally acted upon by the Dominion Parliament.

Cerebral Abscess.

Dr. James Stewart, Montreal, reported two very interesting cases of abscess of the brain situated in the tempero-sphenoidal lobe, and referred to the unusual existing aphasia which was present in both cases, viz., simple inability to name objects. The first case occurred in a young man of twenty-two years who had an otitis media following an attack of influenza. Some six weeks afterwards an abscess formed which was diagnosed as being confined to this area simply on account of the peculiar aphasia,—the simple inability to give the name of a pen or other object when held up to him. The patient was operated upon by Professor Bell, who secured two ounces of pus. Meningitis, however, set in and the patient died. The second case was a girl of 22 years of age. She had had ear trouble for a great many years, with very severe pain at times. She too, had difficulty in naming objects; and she could not name any object whatever finally. She died suddenly a few hours before the operation was to be performed for her relief. On opening the skull at the post mortem two abscesses were found, one skirting the upper margin of the lobe and the other situated about the centre thereof.

In reply to a question of the president, whether we were to take this kind of aphasia as a distinct diagnostic symptom of abscess of that region,

Professor Stewart stated, there is what they call a "naming centre" and when that is destroyed, this particular form of speech defect is present. The cases were illustrated by a diagram.

Gangrene of the Leg Following Typhoid Fever.

Dr. H. H. Chown, Winnipeg, reported two cases of gangrene of the leg following typhoid fever, which had recently come under his observation. In the first case the patient had the classical symptoms of typhoid fever, the spots appearing at the end of the first week and being very numerous. Great pain set in in the calf of the leg, with collapse symptoms, while the limb was cold and bloodless. Cutaneous sensibility was lost over the leg. The third day after the complication set in, the part involved included the lower third of the leg on the inner side and the lower half on the outer. Amputation was performed at the junction of the upper and middle third of the femur. Patient stood the operation well. The temperature before the operation was 102.6; pulse 120. On the following day the temperature was normal and the pulse 110. On the tenth day the flaps were united. There was a rise of temperature a few days later—a relapse, with hypostatic congestion of the lungs. On the fifth day after there was hemorrhage of the bowels. The patient is now the picture of health, weighing 200 lbs. The second was a somewhat similar case in which the blood re-acted early and promptly to the Widal test. The gangrene began in the first case on the 11th day; in the second on the 9th. Keen reports gangrene on the 14th day. The gangrene in the second case extended to the upper and middle third of the leg. The leg was amputated and prompt union took place throughout.

Dr. R. B. Nevitt, Toronto, discussed these cases and mentioned a similar one coming under his observation during the past summer. Gangrene occurred in his case about the third week of the fever, and the patient was seen about a week or ten days thereafter. Amputation was performed through the middle third of the femur. He also referred to a case of gangrene of the arm following an attack of pneumonia, recently observed by him.

Notes on Atropine.

Dr. R. D. Rudolf, of Toronto, contributed a very interesting paper on the above subject. He illustrated by means of a chart the action of the drug on animals and the inferences drawn therefrom of its therapeutic uses. He finds that the drug directly stimulates the heart and thus the blood pressure is markedly raised. He considered that the maximum single dose as laid down by Witherstine of 1-20th of a grain as too large unless used as an antidote; and thinks that we ought never to give more than 1-100th of a gr. of atropine sulphate at one time except in emergencies. He also referred to its action in catarrhal pneumonia of children and its employment before anaesthesia to ward off danger.

The paper was discussed by Dr. A. D. Blackader who congratulated Dr. Rudolf upon it and said that he hoped he would pursue his studies on the subject still further. He considered that strychnine and not atropine was the most powerful heart tonic in our possession. He thought that

late experiments would throw doubt upon atropine being a direct stimulant to the heart muscle; and he would consider it questionable practice to administer a drug when we wanted to stimulate the heart's action that would paralyze the nerve endings.

Lantern Slide Demonstration of Skin Diseases.

Dr. George H. Fox, of New York City, conducted this demonstration. The great majority of the skin lesions shown were of syphilitic origin; and as they appeared on the canvas, Dr. Fox described their histories. One in particular is remembered from the disfigurement of the woman's face. There was a large mass of excrescences on the nose, which Dr. Fox was successful in getting rid of in the course of two or three months, leaving only a slight superficial scar. He laid down a timely word of caution in treating syphilitic conditions, that when the patient was run down and emaciated through large doses of mercury or iodide of potash, not to keep on pushing these drugs, but to desist for a time, and in the interval endeavor to build up the patient's strength and general condition. When that was accomplished, return to the specific treatment, and the results would be found to be more beneficial. At the conclusion of the doctor's demonstration, a vote of thanks was accorded him for his instructing demonstration.

Dr. F. J. Shepherd showed a very interesting case, a boy of sixteen years, who at the age of six sustained a very severe cutting injury of the nerves and vessels of the axilla. all the nerves below the cords of the brachial plexus being cut completely through. At that time, ten years ago, Dr. Shepherd dissected out each nerve separately and united their respective ends by suture. All did well with the exception of the musculospiral, and as a consequence of this the lad has no control over the extensors of the fore-arm.

The Successful Treatment of Two Important Cases of Disease of the Eyes by the Combined Methods of Mercury and Iodide of Potash Internally and Pilocarpine Hypodermically.

Dr. G. H. Burnham, Toronto, reported two cases successfully treated by his combined method. Under this method no such result follows in other plans of treatment, and with this plan a permanent result is got. This treatment has a wide application. Whether iodide of potash or mercury or the iodide alone be given internally, in suitable cases without satisfactory results, if the pilocarpine be added, good results will always follow.

Mental Sanitation.

Dr. R. W. Bruce Smith, of the Brockville Asylum, contributed the last paper. It was a plea for prophylaxis in insanity, and he thought that much would be accomplished in this direction during the twentieth century. Insanity was on the increase in Canada, and it can be ascribed to the fact that while those unfortunates are well taken care of when they become insane, the fact that there have been no preventive measures employed speaks for itself. In order to accomplish good in this direction,

we must seek either to lessen the demands on, or to strengthen the resisting power of the brain. He condemned inter-marriages in families and also amongst those of a deranged mentality. Fifty per cent. of the cases of insanity were hereditary and the descendants of these should be careful in contracting marriage ties. He referred to a portion of one county in Ontario alone, where indiscriminate marriage and inter-marriage has become most fruitful; and he has seen several members of one family from that locality inmates of the same institution at the same time. He considers that the day may yet dawn when we will give the same attention to the rearing of children as we now do to the breeding of horses. Speak of farm life and the tendency it has to melancholy, he thought this class of the community should receive education in participating more in the enjoyments of life and not to continue to rot in domesticity. An upheaval in the sentiment and surroundings of the rural homes would work wonders in prophylactic principles.

The Canadian Medical Association endorsed the scheme for a Dominion Anti-Consumptive League, and the following recommended as provisional officers:—Honorary President, His Excellency, Lord Minto; President, Sir James Grant, Ottawa; secretaries, to be the secretaries of the different provincial boards of health. Secretary-Organizer, Rev. Dr. Eby, Toronto; Treasurer, J. M. Courtney, Esquire.

The Association also recommended the formation of a Medical Defence Association and appointed Dr. V. H. Moore, of Brockville, as permanent chairman to work up the scheme.

The treasurer's report showed that 153 members had been in attendance and that there was a balance of \$240.65.

Election of Officers.

President, H. H. Chown, Winnipeg. Vice-Presidents for the provinces as follows:—P. E. I. H. D. Johnson, Charlottetown; Nova Scotia A. J. Maiter, Halifax; New Brunswick, T. D. Walker, St. John; Quebec, A. Laphorn Smith, Montreal; Ontario, A. A. Macdonald, Toronto; Manitoba, J. A. Macdonald, Brandon; N. W. T., J. D. Lafferty, Calgary; British Columbia, S. J. Trinstil, Vancouver. Treasurer, H. B. Small, Ottawa; General Secretary, F. N. G. Starr, Toronto. Next place of meeting, Winnipeg.

Sir Wm. Hingston and Dr. F. W. Campbell, Montreal, were appointed on the board of governors of the Victorian Order of Nurses.

MISCELLANEOUS.

Spinal Anesthesia.

Perhaps the recent researches of Tuffier of Paris will mark the dawn of the ideal anesthetic era. Certainly this method, which is now shown to have been demonstrated by the American, Dr. Corning, has taken a firm hold on the medical mind, and may eventually lead to the abandonment of the inhalation anesthetics. As now practiced, its facility and innocuousness seem far to counterbalance the transient discomforts and bad effects of the drug. In Tuffier's experience of two hundred cases there has never been a failure to get complete anesthesia, and in no case has there been a serious accident; and this has been the verdict of all who have used this method.

Emesis was present in a large majority of the cases, while headache occurs more frequently, but not often of a severe nature; both of these symptoms are transient. In a certain small proportion of the patients an evening rise of temperature has been noted, and in some profuse sweats, but the following course has been normal. These minor drawbacks do not seem so bad, when we consider what so frequently happens after an ether or a chloroform anesthesia, and the great advantage of no post-operative pneumonia is incalculable.

With the injection of one c. c. of a two per cent. solution of cocain into the subachnoid space there is a complete loss of pain sense below the diaphragm, with no loss of consciousness or tactile sensibility, the motor power being slightly impaired and the intestinal reflexes continuing; this happens within ten minutes after the inoculation. All operations below the diaphragm are then possible without any discomfort to the patient, and can be prolonged for at least two hours before the anesthesia is lost. Under this method such large procedures as hysterectomies, nephrectomies, gall bladder operations and hip-joint operations are possible; in fact, no operation below the costal margin has yet been found impossible.

Kreis and Bumm have made use of this method in obstetric practice, and find that the labors continue normal, without any suffering on the part of the patient. In this country, Murphy of Chicago and Matas of New Orleans have used the subachnoid injection of cocain with most satisfactory results. Certainly the dangers connected are not great, and in many instances this would seem to be the method of election. It has the advantage over the infiltration method of not requiring the same amount of skill, and not handicapping the operator with the worry of attending the patient.

Of course, it will be years before the ulterior effects of the injection will be determined; perhaps they will be nil. In any event, the method merits careful and systematic investigation and possible adoption.

However, we must urge a word of caution against the indiscriminate and unintelligent use of this method of anesthesia. Simple as it is, there is ample opportunity for injury and infection arising from the puncture, especially in inexperienced and careless hands. Let us not overdo this plan of anesthesia so that the public will discredit before it has a fair trial.—*Ed. St. Louis Med. Review.*

The use of Adrenal Substance in the Treatment of Asthma.

Cohen writes in the *Journal of the American Medical Association* of May 12, 1900, that we have in this substance a decided addition to therapeutic resources—quite active when used locally, and hence to be remembered in the prompt treatment of urticaria or edema of the upper air-passages; and less active, but still definitely useful, by internal administration in controlling urticaria or circumscribed edema or similar conditions affecting the bronchial mucosa.

It is not a specific for asthma. It is without good influence, perhaps capable of bad influence, on cases that are really spasmodic—that is, due to contraction of the bronchial muscles. But it is of definite use in that perhaps smaller number of cases of asthma in which the paroxysm is but one other manifestation of a congenital fault of structure or of metabolism, affecting the vasomotor system, and thus permitting the cardiovascular balance, and especially the tonicity of the blood-vessels, to be readily overturned by exciting causes that would have but slight, if any, effect on other individuals. In such cases a more or less continuous administration of adrenal substance, in sufficient quantity to maintain the vascular tone, will act as a preventive, enabling the reactive forces of the individual to combat more successfully the toxins of internal and external origin, the emotional, meteorologic, thermal, and climatic influences, and other sources of disturbance that ordinarily provoke the paroxysm.

As to its dosage, the rule is that of Prof. Ellerslie Wallace, for bleeding in puerperal eclampsia—"Enough." There is great difference in cases and in individuals. Beginning with small doses frequently repeated—*e.g.*, one grain every hour or every two hours—or with a moderate dose, say five grains, once or twice daily, we learn the tolerance of the individual, the tractability or intractability of the symptoms, and regulate accordingly. Cohen has given as few as three and as many as ninety grains of the desiccated gland substance in the twenty-four hours. Five or ten grains every second or third hour during waking hours is a fair dose. In some cases, however, the unnecessary animal substance retained in the preparation gives rise to diarrhea with offensive discharges. If we could have the active agent alone our therapy would be much more definite.

What the active agent is, and how much or how little of that active agent is absorbed, Cohen leaves to laboratory students to determine. Clinically, he has watched closely and critically enough to satisfy himself that neither the susceptibility of patients to suggestion nor the activity of the observer's imagination is sufficient in itself to account for the whole of the results.—*Therapeutic Gazette.*

PUERPERAL ECLAMPSIA. In his experience, says J. B. Todd (Philadelphia Medical Journal, August 11, 1900), cephalgia is the danger signal of coming eclampsia. A woman may have slight albuminuria and recover under proper treatment, but if during labor and for two days afterward the patient complains of severe pain in the head, there is danger of eclampsia. The writer does not rely in treatment on diuretics, especially digitalis and potassium acetate, as they depress the heart and do not eliminate the urea. He believes hydragogue cathartics are required for this purpose, and uses elaterium because it can be depended upon to produce a thorough action. Following the administration of the hydragogue he gives iron and mercuric chloride, as follows:

R Tr. ferri chlor. ʒi
 Hydr. bichlor gr. i.
 Ft. sol. Sig. gtts. xii in a capsule every four hours.

The writer believes that morphine is *the* drug to control the convulsions, provided it is given in sufficiently large doses. He gives from one-half to one and one-half grains hypodermatically, and repeats the dose whenever, and as often as, the patient complains of severe pain in the head, whether it has been one hour or longer since the last dose was given. Todd reports ten cases treated in this manner and sums up the results as follows: In six cases after labor there was a single convulsion; all recovered. Of two cases with convulsions during labor, one had a single convulsion and the other several. Both mothers and children lived. In one case with convulsions in the second month of pregnancy, the patient carried the fetus four months without any inconvenience. In the tenth case, abandoned by an eclectic physician, death ensued before the remedies could act.—*Medical News*.

Chronic Urethritis.

R Iodi	2	| 3 (gr. v.) (gr. xxx.) (ʒ ss.) (ʒ i.)
Potass. iod.	2	
Ol. oliv.	2	
Lanolini	q s. ad. ʒ0	

M.S. Use to anoint a steel bougie.

—*Medical Record*.

THE TREATMENT OF MUCO-MEMBRANOUS COLITIS OF CHILDREN. The *Journal des Practiciens* for June 9 says that in chronic colitis of children with habitual constipation, shedding of the mucous membrane, a form of colitis which commonly succeeds the acute forms, the treatment is the same as for adults: Intestinal lavage, oily injections, castor oil in small or large doses, and calomel occasionally. Henoch prescribes:

R	Hydrochloric acid	5	(7½ grains.)
	Distilled water 100	1,500	"
	Gum arabic 1	15	"
	Syrup of althæa 20	300	"
	Thebaic tincture	2	(2 to 4 drops.)

M. A coffee or dessert spoonful three or four times daily.

—*New York Medical Journal.*

Neurasthenia.

R	Zinci bromidi	1	(gr. xv.)
	Zinci valerianatis		
	Zinci oxidi āā		
	Rosæ conserv. q.s.		

M. ft. pil. No. xx.

S. One before breakfast, dinner and bedtime.

—*Medical Record.*

Hair Tonic.

R	Pilocarpin. hydrochlorat.	gr. v.
	Otto. rosæ	℥ viij.
	Ol. rosmarini,	
	Lin. cantharidis	āā ʒiv.
	Glycerini puri	ʒj.
	Ol. amygdalæ dulc.,	
	Spir. camphoræ	āā ʒiij.

M. Sig. Rub well in, morning and night.

—WHITLA.

Phthisical Cough.

R	Codein	gr. iv.
	Ac. hydrochl. dil.	ʒss.
	Spir. chloroformi	ʒiss.
	Syr. limonis	ʒj.
	Aquam	ad ʒiv.

M. ft. emuls. Sig. Teaspoonful at frequent intervals.

—MURRELL.

Amenorrhœa in debilitated and anemic states.

R	Hydrarg. chl. corros.,	
	Sodii arsenit.,	
	Strych. sulphat.	āā gr. j.
	Potass. carbonat.,	
	Ferri sulph.	āā gr. xxx.

M. ft. pil. No. lx. Sig. One after each meal. —LUTAUD.

—*St. Louis Medical and Surgical Journal.*

TO COOL WATER when ice cannot be obtained, wrap the pitcher in cheese-cloth previously impregnated with ammonium nitrate and dried. Moisten slightly at time of use, dry and use again.
—*Medical Record.*

AN AFRICAN REMEDY FOR DYSENTERY. The Kafirs and Zulus make use of the root of the geranium, of which there is said to be a number of varieties, all, however, of equal therapeutic efficacy, in South Africa, in the treatment of dysentery. They simply chew the root, but the British Army surgeons give it in the form of a decoction in milk. The remedy is reported by those who have employed it to be a real specific, no failure to cure within thirty-six or forty-eight hours being recorded.—*Medical Record.*

NEW LOCAL ANESTHETIC FOR THE EAR. Aqueous solution of cocaine and eucaine having proved so unsatisfactory when applied to the tympanic membrane as anesthetics, the use of aniline oil and alcohol as vehicles, as first tried by Albert A. Gray, should prove a boon to aurist and patient, as paracentesis is stated to be entirely painless five minutes after the anesthetic is employed. Ten drops of the following preparation are injected into the external auditory canal and allowed to flow to the membrane:

R	Hydrochlorate of cocaine	.....	5 parts.
	Dilute alcohol	.....	50 "
	Aniline oil	.....	50 "

M.

Granulations of the tympanum can also be removed painlessly, first cleansing and drying the parts before using the solution. In case of thickened and hardened membranes, the following formula is more effective:

R	Hydrochlorate of cocaine	.....	10 parts.
	Absolute alcohol	.....	30 "
	Aniline oil	.....	70 "

—*Med. News.*

M.

THERAPEUTIC HINTS FROM THE *Medical Record* :*Epileptiform Convulsions due to Auto-intoxication.*

- R Ext. chirettæ gr. ij.
 Leptandrin gr. ss.
 Podophyllin gr. ʒ.
 Euonymin,
 Creosote (beechwood)..... āā gr. ss.
 M. ft. pil. No. 1. Sig. One such after each meal.

—HARE.

Tooth Powder.

- R Pulverized cereal 75 parts.
 Sodium borate 18 "
 Potassium chlorate..... 7 "
 Saccharin..... q. s.
 Flavor to taste.

—FLETCHER.

Seminal Emissions without marked erection.

- R Strychninæ sulph gr. j.
 Ac. phosphorici dil ʒij.
 M. Sig. Gtt. xxv. in water after meals.

—B. K. TWITCHELL.

Smoker's Gingivitis.

- R Salol..... 1.
 Tinct. catechu..... 4.
 Spt. menth. pip ad 120.
 M. ft. lotio. Sig. Teaspoonful in half a glass of tepid
 water as mouth wash.

The Canada Lancel

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EDITORIAL.

IODOFORM IN SURGICAL PRACTICE.

The crusade against the use of iodoform in surgical practice begun some time ago appears to be gaining strength. Those who oppose its use claim that it frequently produces grave toxic symptoms from absorption, that it is a local irritant and thus retards healing, that far from being germicidal, organisms flourish in it, that its offensive odor makes it 'socially disagreeable,' and finally that wounds heal quite as well or better without it, so that no good reason remains why such an expensive and apparently useless drug should form part of the surgeon's armamentarium.

Brush (Journal of the American Medical Association, Dec. 1899) set out to ascertain the opinions of leading surgeons as to the value of iodoform in practice. Of eighty-four replying to his questions, thirty-seven thought the drug could be abolished without detriment to surgery, while the remaining forty-seven thought there might be some loss, particularly in the treatment of tuberculous diseases. Even in these cases—the last

stronghold of the champions of the drug, we have Mr. Edmund Owen, in the address in Surgery before the Canadian Medical Association, say that he has failed to discover that iodoform has any peculiar merit in the treatment of tuberculous lesions, and that his results are no worse since he discarded its use.

As surgeons have come to study more carefully the process of healing of wounds, the more clearly does it appear that antiseptics and germicides play a much less important rôle in successful management than was at one time attributed to them. With absolute cleanliness, to obtain which antiseptics may be of use, and rest, Nature does the healing without the necessity of artificial aid. This fuller knowledge of surgical pathology is responsible for the breaking of another idol.

ANAESTHESIA BY SPINAL SUBARACHNOID INJECTIONS OF COCAINE.

Professor Tuffier of Paris (*La Semaine Medicale*), reports sixty-three operations on the lower parts of the body—lower extremities, rectum, abdomen and genito-urinary organs—including amputations and hysterectomy, in which efficient analgesia was obtained by injecting 1 c. c. of a two per cent. solution of cocaine into the subarachnoid space in the lumbar region of the cord. Dr. Tuffier used a needle $3\frac{1}{2}$ in. in length, the bevelled point being short. After careful preparation of the patient, who assumes the sitting posture, and after thorough sterilization of the solution to be used, the needle is introduced just beneath the spine of the fifth lumbar vertebra and the fluid slowly injected into the subarachnoid space. The anaesthesia begins in about ten minutes and extends upwards as high as the thorax, lasting for about an hour and a half. Certain symptoms, such as nausea, vomiting, epigastric depression, headache, with dilated pupils and rapid pulse, may supervene, followed by an evanescent rise of temperature, but no fatal or even serious complications have yet occurred. By Prof. Tuffier's method, analgesia sufficient to allow any operation below the diaphragm may be obtained, the patient remaining perfectly conscious. If continued experience shows the method to be devoid of danger and the technique sufficiently simple, there is a wide range of surgery in which it is applicable. It certainly opens up a new and important field for investigation in the search for a perfectly safe and satisfactory means of producing surgical anaesthesia, and further reports on the subject will be anticipated with much interest. While no fatal cases have been reported, the symptoms mentioned as following the injection are sufficiently startling to make most operators hesitate to employ it until the effects are more definitely and thoroughly understood.

CANADIAN MEDICAL ASSOCIATION.

The thirty-third annual meeting of the Canadian Medical Association was held in Ottawa on Sept. 12th, 13th and 14th, with about one hundred and seventy-five members in attendance. The profession of the Capital spared nothing in preparing for the reception of visiting members, whom they entertained royally. The complimentary dinner at the Russel House, given by the local profession, was a very enjoyable social feature of the meeting. The attendance at the various sessions of the association was fairly good, many of the papers under discussion being of more than ordinary interest.

To Dr. H. H. Chown, of Winnipeg, has fallen the honor of the presidency of the association for the ensuing year. Dr. Chown is well fitted for the duties of presiding officer and his election met with the general approval of the meeting. He should receive the united and hearty support of the profession in eastern Canada in making the coming meeting in Winnipeg worthy of the prairie metropolis.

EDITORIAL NOTES.

Sterilization of Catgut.

G. Brown Miller (Johns Hopkins Bulletin) considers that catgut is the cheapest and best absorbable material for sutures and ligatures. The only drawback is the difficulty of thorough sterilization. From a bacteriological examination of the materials prepared by various methods that have been recommended, he concludes that chemical agents must be considered unsatisfactory for this purpose. He found the Cumol method to produce absolutely sterile material and therefore was the one worthy of confidence. The details for preparation by this means, as carried out in the John Hopkin's Hospital, he gives as follows:—

“Cut the catgut into desirable lengths, 35-40 cm., wind it into small coils or rolls each containing eight to ten strands (It should not be tied or only loosely). It is then heated slowly (at least two hours) to 85° C. in a dry air sterilizer and kept at this temperature approximately for two hours. After thoroughly drying it is placed immediately in a metal vessel containing Cumol (which should cover the catgut), and this is heated over a sand bath to 160-165° C. and kept at this temperature for one hour. The Cumol is then decanted and the excess left in the catgut is evaporated by leaving the vessel over the sand bath for one hour longer, the flame having been removed. The rolls of catgut are then placed in

widemouthed sterile test tubes, a few rolls in each tube, and these are kept in a covered vessel and used as desired. A convenient apparatus has been devised by Clark which could be improved by leaving off the glass indicating tube. The principal points to be observed are as follows: the catgut must be perfectly dried before subjecting it to the high temperature of boiling Cumol, and care must be taken that the vapor of the Cumol, which is heavier than air, does not come into contact with the flame or red hot metal. If the catgut is not perfectly dried it will become brittle on boiling. To prevent the Cumol from taking fire the sand bath must be a wide one, extending at least 3-4 inches beyond the flame on all sides, and the vessel containing the Cumol should have a tightly fitting top with a corked opening for the thermometer, and an escape tube, by means of which the gaseous Cumol can be conducted away from the flame. Any device by which the vapor is prevented from rolling over the sides of the vessel will answer. It is well to place the catgut before drying in a suitable wire basket and surround it with filter paper. The basket with its contents is transferred from the drying apparatus to the Cumol. This device prevents the catgut from coming in contact with the sides of the metal vessel. The method of Cumol sterilization has been used for five years in the Gynecological Department of the Johns Hopkins Hospital with perfectly satisfactory clinical results. The objections to its use are the time and care required in carrying it out. The cost is relatively small, as very little Cumol is lost each time and the liquid can be used repeatedly."

American Public Health Association

The 28th Annual Meeting of the above association will be held in Indianapolis from Oct. 22nd to the 26th, under the Presidency of Dr. P. H. Bryce, of Toronto. A very extensive and excellent programme has been prepared for the meeting.

Illustrious Dead.

Several illustrious members of our profession have recently joined the silent majority—Dr. Lewis A. Sayre, the great American Orthopaedic Surgeon, Dr. Alfred Stille, Emeritus Professor of Medicine, University of Pennsylvania, Dr. Da Costa, author of the well known work on Physical Diagnosis, Dr. A. J. C. Skene, the Brooklyn Gynaecologist, and Dr. Hunter McGuire. It is fortunately rare that so many landmarks in the profession should pass away within so short a time.

PERSONAL.

Dr. W. C. Law, Beeton, is removing to Dauphin, Manitoba.

Dr. L. B. Ashton, (Trin. '00) is taking up practice at Quincy, Illinois.

Dr. H. J. Hamilton, Church St. has returned from a holiday on the Georgian Bay.

Dr. Howard Kelly, of Baltimore, was recently in Toronto, the guest of Dr. Sweetman.

Dr. W. S. Curran, of Detroit, (Trinity '99) was recently married to Miss Annie Fawcett, of Toronto.

Dr. Boyd Miller, a son of Ald. R. S. Miller, Owen Sound, has been appointed a United States surgeon in the Philippines.

Dr. E. A. Spilsbury, formerly lecturer on Laryngology and Rhinology, Trinity Medical College, has opened an office in Ottawa.

Dr. R. M. Mitchell (Trin. '92) has been appointed Dominion Land Agent at Weyburn, Assinaboia, where he is now practising.

Dr. Geo. Badgerow has sailed from New York on the R. M. S. Teutonic for England where he will spend some time in post graduate work.

Dr. W. T. Connell, Professor of Pathology, Queen's University, Kingston, was married on Sept. 19th to Miss Florence Ford of the same place.

Dr. Herbert Johnston, a former student at Trinity Medical College, and now practising at Anaheim, California, was married on Oct. 2nd to Miss Annie Wickett of Gifford St., Toronto.

Dr. Thos. S. Cullen, representative of the Johns Hopkins Hospital to the Medical Congress at the Paris Exposition, spent a few days visiting friends in Toronto on his way back to Baltimore.

Dr. A. T. Brousseau, Professor of Surgery in Laval University and Surgeon to Notre Dame Hospital, died in Montreal on Oct. 6. The deceased was one of the best known surgeons in Canada.

Mr. Edmund Owen, Surgeon to St. Mary's Hospital, London, who delivered the address in Surgery at the recent meeting of the Canadian Medical Association, spent a few days in Toronto, the guest of Mr. I. H. Cameron.

Dr. Ezra H. Stafford, formerly Medical Assistant at the Asylum for the Insane, Toronto, is spending a holiday in Toronto previous to going to the West Indies where he will spend the winter. Dr. Stafford is devoting much of his time to literary work.

Mr. A. H. Anderson, of the Royal Canadian Regiment of Infantry, a third year student in Trinity Medical College, was accorded a very warm reception by his fellow students on his return to Toronto last week. Mr. Anderson has completely recovered from an attack of enteric fever, contracted at Orange River.

Dr. Fife Fowler, who for about fifty years has been connected with the Medical Faculty of Queens University, has resigned his post as Professor of Medicine, though he will continue to act as Dean of the Faculty. Dr. Fowler has represented Queens University on the Medical Council of Ontario, and for many years has been one of the most prominent figures in the profession in the Province.

Dr. A. S. Tilley, of Bowmanville, was married on Oct. 10th to Miss Amelia Caroline Philip, daughter of Richard Philip, Esq. Wilcox St., Toronto. Dr. Tilley graduated at Trinity College in 1892, and served on the resident medical staff of the Toronto General Hospital in 1893, since which time he has been practising in Bowmanville with marked success. The Lancet offers its congratulations.

It is stated that Dr. Jas. Third, who recently retired from the position of superintendent of the Kingston General Hospital, will succeed Dr. Fowler in the chair of medicine. Dr. Third is a graduate and gold medalist of Trinity University (1891) and was at one time on the resident medical staff of the Toronto General Hospital. He did a successful general practice for some years in Trenton, going to Kingston some three years ago to take charge of the General Hospital there. Dr. Third has the reputation of being an excellent student and an able and popular teacher. We wish him success in his new post.

BOOK REVIEWS.

PROGRESSIVE MEDICINE, VOL. III, SEPTEMBER, 1900.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 408 pages, with 14 engravings. Lea Brothers & Co., Philadelphia and New York. Issued quarterly. Price \$10.00 per year.

The articles in this valuable digest are well worth study and will be found profitable, particularly to the general practitioner. The volume bears particularly upon medical subjects. Diseases of the thorax and its viscera, including heart, lungs and vessels, are dealt with by Wm. Ewart, M.D., F.R.C.P.; diseases of the skin by Stelwagin; diseases of the nervous system by Spiller of Philadelphia, and obstetrics by Norris of the University of Pennsylvania. In the latter article an appreciative and somewhat extended reference is made to a paper by Professor A. H. Wright of Toronto, in the *American Medical Quarterly*, Sept., 1899, with the title "Heart Disease from an Obstetrical Point of View."

To the practitioner in need of good medical society and unable by isolation or pressure of work to secure it, we heartily recommend this volume.

J. T. F.

DISEASES OF THE TONGUE. 2nd EDITION.

By Henry T. Butlin, F. R. C. S., D. C. L., Surgeon to St. Bartholomew's Hospital, &c. and Walter G. Spencer, M. S., M. B., (Lond.) Surgeon to the Westminster Hospital, &c. Illustrated with eight Chromolithographs and 36 engravings. Cassell & Co., Limited, London, New York, &c. J. A. Carveth & Co., Toronto, 1900.

The second edition of Mr. Butlin's work revised and enlarged has just made its appearance.

A chapter on the anatomy of the tongue by Walter G. Spencer has been added, which enhances the value of the work. Malformations of the tongue, wounds, burns, stings of insects, etc., are fully discussed.

An excellent chapter is devoted to the appearance of the tongue in various diseases and conditions. Glossitis in all its forms is fully dealt with, and the relation of chronic superficial glossitis to cancer pointed out. Ulcers of the tongue—simple, herpetic, tubercular, syphilitic and cancerous are fully described as are also the various tumors which may effect the organ. Cancer of the tongue receives especially full consideration.

The treatment of the various conditions—surgical and medical—is taken up in a thoroughly practical way. The illustrations are beautiful and add greatly to the value of the work.

Altogether this work is a most satisfactory one and will be an addition to any medical library.

H. B. A.

PUBLISHERS' DEPARTMENT.

DOES THIALION TAKE THE PLACE OF CALOMEL ?

By R. A. MEATH, M. D.
Memphis, Tenn.

The following case has been of unusual interest to me inasmuch as it has developed a use for thialion which must prove of great value to every doctor practicing in malarial regions like the one where I reside. It is difficult for the physician not living in such places to realize the tremendous power exerted against the health of the community by malarial poisoning, which is always more or less associated with enlarged spleen, enlarged and torpid liver, together with constipated bowels.

Calomel has always been our mainstay, in fact it is impossible for us to practice medicine without it, with any degree of success. But it seems that in thialion we have a new remedy presented to us, which will not only cure constipation, relieve the torpidity of the liver, but also increase the activity and anti malarial power of quinine.

I do not want to be misunderstood in this matter. I do not mean to say that two grains of quinine given with thialion is increased per se to 4 grains, but I do mean to say that by a thorough cleaning out of the liver, the reduction in size of the spleen, and the relief of the constipation, creates a condition by which the quinine is taken into the system more completely, more compactly, if I can so use the term, and is absorbed to a greater degree.

The case that I present here is typical; we have them by the hundreds in this section:

A woman, American, age 33, suffered for a long time from chronic malaria. The attack commenced with soreness through the liver, back, muscles of the back, and through the kidneys, radiating over the pubis and front of the abdomen, with extreme constipation, and when the stool was finally passed, it was of a light green color, almost as green as if Paris green had been mixed with water rather thick. The liver was enlarged, the spleen was enlarged, the skin was dry, rough and sallow, and liver spots were on the face.

She was ill quite a good while before I saw her first, and then was under my treatment for a good while before I thought that possibly thialion might do her good. And I was really astonished at the results. The first influence I noticed was that the green material stopped from the stools and they changed in character completely, and then she commenced to pick up, and the quinine took hold better, while the appetite improved.

The kidneys slushed out and the spleen began to be reduced, and she got better fast.

I was satisfied that if I had used the remedy at the start of her sickness, she would have gotten well much quicker. I had been giving 1 grain doses of calomel every two hours for four doses; then in four to six hours I gave castor oil, but the action of this was not at all to be compared with that of thialion. In fact, I think the latter will take the place of calomel, and I am now carrying on an interesting line of experiments in this direction.

In this case, I gave thialion in teaspoonful doses, a teaspoonful in hot water taken three times the first day, and after that once a day taken in the morning on rising for three weeks, when she was entirely well.

We have a great deal of malarial fever here, with constipation, pains in the liver, stomach and kidneys, and I am satisfied that thialion will clear the system of the malaria, because it helps out the quinine. We have more or less rheumatism and neuralgia with soreness of the body and limbs associated with it, which is probably due to the improper elimination of the uric acid.

Of course it takes more than one swallow to make summer, but cases are rapidly multiplying where thialion has wielded a powerful influence for good in this class of cases, and I only hope that future experience will bear this out.

HORLICK'S MALTED MILK.

FACTS IN EVIDENCE.

The fact that cow's milk has such general use by infants, growing children, and invalids, brings the question of wholesome milk to the attention of the thoughtful physician.

It is stated that since 1885 fifty-three epidemics of typhoid fever, twenty-six of scarlet fever, eleven of diphtheria, and one of Asiatic Cholera have been traced directly to the use of milk contaminated by disease-producing germs; and this has no reference to the thousands of sporadic cases of these diseases from the same causes.

The average cow is covered by dirt of all kinds, dried foecal materials, and loose hairs. The droppings of these, together with dust and bacteria from the hide of the animal is very great. When to this filth is added the pathogenic micro-organisms, tuberculosis and anthrax which come from diseased animals; and bacilli from typhoid fever, scarlet fever, and diphtheria, which get into the milk when it is exposed to polluted atmosphere or mixed with unwholesome water; and the poisons which develop by bacterial growth, to say nothing of the questionable agents called preservatives, added by vendors; one is led to question the advisability of prescribing commercial cow's milk at all. The ordinary methods of sterilization are carelessly followed by most people, and still with less care by those not responsible.

The above objections do not obtain with Horlick's Malted Milk. All cow's milk which enters into combination with malted barley and wheat in Horlick's Malted Milk has the closest scrutiny, careful examination and analysis. Only the richest and best that Wisconsin can supply—cream and all—is used. The product is thoroughly pasteurized, and is free from pathogenic germs. It is a food immediately ready for use, requiring no cooking, or the addition of any element to complete it.

Samples and literature mailed to any physician's address on application to GILMOUR BROS. & Co., 485 ST. PAUL ST. MONTREAL

WEMALTA.

This is a scientifically prepared food for infants. It contains, according to the highest authorities, all the nutritious elements of a mother's milk when she is in a state of perfect health. The little infant takes it readily from a nursing bottle, and it can be fed to the child of a larger growth with a teaspoon.

Mothers who have a deficiency of milk, or who feel run down, will find a gruel made from WEMALTA FOOD assist nature wonderfully in up-building the system. It nourishes every part of the human body and gives that glow and feeling of satisfaction which always accompanies the best of health.

ANALYTICAL LABORATORY, Toronto, Jan. 28, 1897.

GENTLEMEN—I have examined the sample of Wemalta Food for Infants submitted by you, and have also studied its composition with reference to the intended purpose. From these considerations I have no hesitation in stating that I believe it capable of fulfilling perfectly all that can be expected of a farinaceous food of this character.

The greater part of the food is composed of carbohydrates in the form of amylose, dextrin, maltose and sucrose, which form the calorifiant material from which fat is built up and energy derived. To this is added a very considerable portion of vegetable fatty matter which tends to the same end. The nutritive principle is well represented by proteids, such as gluten, fibrin, with soluble albuminoids. The richness in these nitrogenous materials over the flours of various grains, indicates the presence of the inner cortical portion of wheat, together with the germinal part, the latter containing, relatively, a larger proportion of fat.

The ratio between the nutritive and heat-producing components is well-regulated, and approximates to that of human milk, which is as one to four. The reaction is such as to correct the results of acid fermentation.

The above materials constitute the essentials of a perfect food, but there is yet to be provided a digestive principle by which the amylaceous or starchy matter, may be converted into a form which can be assimilated by infants. It is well known that for the first three months the saliva of infants does not contain this principle in sufficient amount, and the enzyme of the pancreatic juice is also very deficient.

I see that you have supplied these wants by the admixture of a quantity of diastasic ferment, and have also partially converted the starch by exposure to heat. The food, if suspended in tepid water will almost digest itself, at least as far as starch is concerned.

Geo. W. Samuel, M.D., Nashville, Tenn., says: I had a case of a man who had been drinking heavily for several days. I prescribed Celerina in tablespoonful doses, every three hours, and in a short time he was in good shape again. I also used it in a case of neuralgia, in the following formula:

R Celerina..... 8 ounces.

Quinia Sulp..... 60 grains.

M. Sig. Teaspoonful every four hours.

SYP. HYPOPHOS. CO., FELLOWS

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The Essential Elements of the Animal Organization—
Potash and Lime ;

The Oxidizing Elements—Iron and Manganese ;

The Tonics—Quinine and Strychnine ;

And the Vitalizing Constituent—Phosphorus ; the whole combined in the form of a Syrup, with a slight alkaline reaction.

It differs in its effects from all Analogous Preparations : and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt : It stimulates the appetite and the digestion ; it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy ; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of secretions, its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, "Syr. Hypophos. FELLOWS" As a further precaution it is advisable to order in original bottles.

FOR SALE BY ALL DRUGGISTS.

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WHOLESALE AGENTS

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It acted like a charm. In a case of impotency, I used calomel in connection with Celerina, and the patient reports everything standing all right.

Parke, Davis & Cos. Canadian Price List for 1900-1901 is to hand and, as usual, is a credit to this well known and enterprising firm. Many physicians have found this catalogue in the past to be a very useful and convenient reference book. We can testify to this issue being even more complete than any of its predecessors. We would call special attention to the notes on Bacteriological and Biological Products, pages 252 to 256, where a fund of useful information can be found in every concise form regarding these newer medicinal agents. We note with pleasure the growth in size of this firm's Canadian Laboratory at Walkerville, Ont., during the past year which was rendered necessary by their ever increasing output in Canada. If any physician has not received a copy of this catalogue it may be had for the asking.

PETROLEUM IN THE TREATMENT OF INFANTILE DIARRHOEA.

W. E. Fothergill in conducting his clinical researches (*Medical Chronicle*, Manchester, England, April, 1900), during the summer of 1899, administered petroleum in thirty-four cases of infantile diarrhoea. "The preparation was an emulsion containing 33½ per cent. of petroleum and the doses varied from ʒss. thrice daily to ʒi every four hours; the usual dose for a child a year old was ʒi of the emulsion (℥ 20 of petroleum) thrice daily. In two cases salol was substituted at the end of a week. One child dies. In the remaining cases recovery was rapid and complete. There was no derangement of the stomach, vomiting ceased almost before the diarrhoea was checked, and the stools soon regained their normal color and consistency. The emulsion seemed also to favor recovery from the accompanying bronchial catarrh. It is said that the whole quantity of petroleum ingested may be recovered from the faeces. Clinical observation shows, however, that petroleum has an influence on mucous membranes other than those of the alimentary canal. Its action in cases of bronchial and vesical catarrh can be explained only by supposing that after absorption from the intestines petroleum is excreted by various organs. These experiments seem to prove that infantile diarrhoea can be treated successfully without the use of opium or astringents."

Angier's Petroleum Emulsion has been prescribed by the medical profession of the United States as well as of England, for many years for just this class of troubles, and the foregoing results have often been verified in the hospitals of this country and by leading practitioners.

Angier's Petroleum Emulsion contains 33½ per cent. of purified crude petroleum, 9 grains of the combined salts of lime and soda, with glycerine and emulsifying agents, and was probably the emulsion used by Dr. Fothergill. It is particularly adapted to the treatment of infantile troubles. It does not in any way disturb digestion or irritate the stomach, but on the contrary benefits them in every way, and children always like to take it. The emulsion may be prescribed to be taken in a little milk or water, which eliminates all taste of the medicine.