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# THE CANADA LANCET.

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## Original Communications.

### SULPHURING OR BLEACHING DRIED FRUIT A MISTAKE, IF NOT A CRIME.

BY JOEL W. SMITH, M.D., CHARLES CITY, IOWA.

The subject of this paper should command the careful attention of consumers of dried fruit, of conscientious fruit dealers, and of all health authorities. Fruit is now regarded more as a necessity than as a luxury, the want of it being a common cause of ill health.

As fresh fruit is not always obtainable, various methods for preserving it are in use, drying being one of the oldest and best for many fruits. Middle-aged people recollect when sun or air drying was the only method for market. Then some good housewife discovered that more rapid drying by artificial heat, with or without the addition of sugar, was a cleaner method, safer against fermentation and decay, retained the flavor better, and the fruit was also lighter colored, than when sun or air dried. The present evaporators are only an enlargement of the idea of such more rapid drying, while canning consists in the exclusion of the micro-organic germs of fermentation.

This is an age of progress, yet experience often shows that not all changes are improvements. It is about fifteen years since the sulphuring or bleaching of dried fruit began. At first only the uniform light color was sought, as in apples, pears, etc., but for some years past nearly all the large evaporating establishments have "sulphured" all kinds of fruits and some vegetables, and now much of the California sun-dried fruit for market is also treated in the same manner. The light color, especially of apples, early attracted unthinking consumers and commercial men, thus materially increasing the price of such fruit. That caused

the practice to spread even to those who disapproved of it. The expense and trouble were very slight. Fruit so treated is said to dry more readily, consequently all now prefer to do it.

While the apparent change is only in color, there is a loss of the natural fruit flavor, even by the most careful sulphuring. Unfortunately, some people do not notice the difference, but careful comparison shows it, as is admitted by the manufacturers of such fruit.

The practice began in California with apricots, as early as 1879. At the Twelfth State Fruit Growers' Convention, held in Fresno during four days in November, 1889, a paper on "Fruit Drying" was read by J. L. Mosher, of San Jose, and in his paper he remarked: "If fruit be picked before ripe and over-sulphured to produce whiteness, it is devoid of its true rich taste and flavor, and *only requires polishing to make buttons.*" (The italics are his.) In discussing the paper, one gentleman said: "I believe sulphuring the fruit is the greatest mistake in the world. I do it, but I believe it is wrong; the flavor of the fruit is gone after it is sulphured."

This change in quality was the first thing that called the attention of the writer's family to what was lacking in the "nice, uniformly colored" bleached fruits.

Later investigations have proved the presence of sulphate of zinc, "white vitrol," in all samples of fruit where zinc surfaced trays were used to hold the sulphured fruit while drying. Interested parties have charged the German prohibition of American evaporated apples to rival trade opposition, but there is no German fruit to compete with them. The real cause was the finding of zinc poison in considerable quantity. A good paternal government aims to protect its people.

#### WHY SULPHUR FRUIT AT ALL?

The advocates of sulphuring fruit say: (1) It dries quicker, (2) looks better, (3) keeps better, and (4) sells better. Besides, it makes ripe, unripe, and poor fruit all look alike; and if not so good for it, but few know it.

Sulphurous acid is formed by burning sulphur, and is readily absorbed by water. It abstracts oxygen from many vegetable substances, and thereby bleaches them. It also tends to prevent microscopic organizations that cause fermentation.

The acid in liquid form is colorless, very cheap, and smells like burning sulphur; is antiseptic, a preservative fluid for some substances—sample fruits, etc. Sulphur is often burned to disinfect sick-rooms of disease germs, and to kill rats, mice and vermin, but its use with food is objectionable. Ants and other insects, it is said, will not touch sulphured fruit, while they readily attack well ripened fruit that is not sulphured. The instinct of insects and animals is sometimes better than the practice of human beings. In general, substances that repel such creatures are hardly safe for human food.

#### THE EFFECT ON CONSUMPTION

has seemed to be a decided falling off in demand among the more intelligent class of people. Retail grocers know that many who once used dried fruit extensively, say, "Somehow we have lost our relish for it," and have almost ceased to use it since the craze for sulphuring fruits began. Fruit men say, "The public demands sulphured fruit, will pay more for it, and we will supply it." The public will yet show them that it can get its eyes open. As the green and canned fruit interests are the only permanent gainers by the sulphuring process, they are interested to have it continued.

#### DIFFICULT TO OBTAIN.

It is not easy to obtain a superior quality of unbleached fruit. In 1889 several retail grocers who understood the question corresponded with parties evaporating apples. The reply was, that "if an order for not less than twenty barrels was received at one time, apples would be furnished unbleached, otherwise not."

#### SULPHURING NOT DESIRABLE.

The slightly yellowish-brown color of unbleached dried fruit is an evidence of ripeness, good quality and proper drying. The more rapid the drying the lighter will be the color, and the fruit will keep well if at once properly excluded from the air. When sulphured, the good, the poor, and the unripe all look alike. Not so with the unbleached. No poor nor unripe fruit can make good dried fruit. The gain of sulphuring is always with the dealer, and not with the consumer.

#### HEALTH AGAINST LOOKS.

In preferring looks to quality, the people are

often at fault. Public enlightenment will correct most dietetic errors. Good health is now sought by many, and will be by more in the near future, through correct living, rather than by the swallowing of drugs. And in that more excellent way, "in the good time coming," there will be no demand for sulphured and other drugged fruit among intelligent people.

#### DANGERS.

There is danger from fruit in metal cans, as is well known, and fresh fruit is frequently unobtainable, while both are often more expensive than dried fruits. Good, unsophisticated dried fruits are always harmless. If green fruits are at times unobtainable, canned fruits dangerous, and a popular craze has rendered dried fruits also dangerous, what can the suffering public do? It is between the alternatives of using no fruit, or that which is injured or poisonous. Is the sulphuring of fruit a mistake, or a crime?

#### TO CORRECT THE ERROR,

enlighten the people, and prohibit injurious practices. Legal suasion only will stop it at present. The common schools in many states are required to teach the effects of alcohol and narcotics. Why not also include the effects of different foods?

### REPORT OF A CASE OF PUERPERAL ECLAMPSIA.

BY D. A. KIDD, M.D., BYNG INLET, ONT.

Mrs. McG., æt. 24 years, felt faint on the 20th July, 1891, shortly after eating her dinner (noon), and went out doors for fresh air, but was not out long when she took a fit and fell down. She came out of the first fit in a few minutes and walked into the house and sat down. In the course of half an hour another convulsion came on, and I was summoned to her aid. Having to go some six miles, it was five o'clock when I arrived. She had had seven convulsions and was in a semi-conscious state, with pulse 110, temperature 102°, respiration—which was somewhat labored—35 per minute. I gave 20 grs. of pot. brom. in solution, and a second dose in half an hour. Between doses patient had a convulsion and emesis was produced. It was found on inquiry that patient was pregnant four months, and had been feeling quite well up

to the hour in which she took the trouble, with the exception of a little headache for a few days previous. The ankles were somewhat cedematous.

The therapeutic measures are chloral, chloroform, bleeding, morphia, purgation, pilocarpine. Her friends stated that two doctors had said on a previous occasion that she was not able to stand chloroform, but it was used in small inhalations. The chloroform was not urged sufficiently to stop the fits which took place about every twenty to forty minutes. Matters grew gradually more serious toward midnight. The uterus had not begun to act before eleven or twelve o'clock. Thirty minims of tinct. ergot was used to stimulate the uterine action then, and also chloral to dilate os. The friends thought it unwise for me alone to use instruments to dilate, for fear of her dying in the proceedings; and may be as well, since some authors depreciate any interference in that way. From twelve o'clock till five o'clock in the morning patient was growing worse, and all present looked for her death at any time. Her pulse ran by degrees up to 165 per minute, temperature 104° and 5, respiration—which was very much labored—55 per minute. Her tongue constantly protruded, and saliva was sprayed forth at every breath. Her neck, which was hard and tense, was about twice the natural size. The lips were purple and the extremities were gradually getting cold. Patient's eyeballs were insensible to light and touch all night, and she was also comatose. During the night, and up to five o'clock in the morning, the convulsions continued, at varying intervals of twenty to forty minutes. Each fit lasted about three minutes. Patient had thirty-five convulsions from beginning to the end. At five o'clock in the morning it was noticed that the os was dilating, which was aided by digital manipulation. The uterus was now firmly contracting. For a time efforts were made to dilate and membranes were ruptured. The feet presented, and soon delivery was complete. Patient had no more convulsions after delivery, and was sensible to handling right away after it. Hæmorrhage was small, and womb contracted well by keeping index finger in the os while a to and fro movement was gently exercised. Pressure with the left hand was kept on the abdomen, and this manipulation of the organ induced contraction, so that the os would grasp the finger as a child would a nipple.

Miss L. A. Davis, M.D., 20 Washington Ave., Toronto, happened to be in the vicinity, and was called in consultation some six hours after delivery. We placed patient under the influence of chloral, 10 to 15 grs. per day, to be continued till better. Patient was kept on milk diet, broths and eggs. It is now one month since patient had first attack, and she is able to work around the house. The kidneys were stimulated some with potash salts and digitalis. Injections, also pulv. glycyrrhizæ co., were used for the bowels. Tonics, with some ergot, were used for a time; chloral constantly, amm. brom. Her temperature and respiration returned to normal in a week, but pulse remained 100 and 110 per minute for much longer time. Her appetite returned shortly to normal.

As to the different theories as to the cause of eclampsia, but one appears clearly in this case—that of the kidneys being interfered with, for there was albumen in abundance in the urine. Does it not seem to be in the nerve mechanism—maybe through the sympathetic system of nerves? How could *pressure* from a pregnant uterus of four months effect the kidneys? At no time was there a suppression of urine in this case.

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#### EXCISION OF KNEE JOINT AND REMOVAL OF NECROSED FEMUR.

BY DR. G. T. ORTON, WINNIPEG.

In the summer of 1890 I was called upon to make an extensive tour of medical inspection of the Indian Reserves on the lakes Winnipeg, Winnipegosis and Manitoba, as well as down the Nelson River, and up the Saskatchewan as far as Cumberland House. Amongst the numerous cases of scrofula in its various forms which constantly came under my notice, I may be permitted to describe one of very considerable interest. It is the case of a little girl, nine years of age, very much reduced by the excruciating pain she suffered, as well as the profuse discharge from numerous sinuses around the knee joint, the result of caries of the articular ends of the femur, tibia and fibula. I decided upon excision of the joint as the only possible means of saving the life and limb of the child, so gave directions for all necessary preparations to be made, including a lounge for her to lie on, some birch bark and willow twigs, with which I deter-

mined to make a splint, and plenty of well dried moss in common use amongst the Indians as an absorbent with which to make pads, so that I would have no delay on my return from Cumberland House to this the Pas Mission Reserve. After making what I thought a perfect model of a splint with the birch bark and ribs of willow twigs to preserve its shape tacked on, with Mr. W—, a medical student who accompanied me to administer chloroform, and a clerk from H. B. store, who kindly volunteered to otherwise assist me, I proceeded with the operation which was soon completed by the semi-lunar flap operation; so far as the resection of the joint was concerned, including removal of patella which was also diseased, but to my horror after sawing off end of femur with a butcher's saw, I found a pus exuding from hollow shaft of the bone, and soon discovered that the shaft of the femur was necrosed, and that in the surrounding separated periosteum numerous spiculae of new bone were thickly dispersed. Whether to amputate at the hip, or what to do, was the problem to solve, and to add to my difficulty my assistant from the H. B. store fell to the floor in a dead faint, and Mr. W—, administering the chloroform, was on the eve of following suit had I not caught him and made him lie on the bed. I soon decided that my only course was to remove as much as possible of the necrosed femur, thoroughly clean the wound antiseptically, do as little injury as possible to the periosteum, introduce a drainage tube, place the limb as securely as possible in my birch-bark splint and let the case take its chance. Having to attend to chloroform, being and in every way single handed, all this was no easy task to accomplish; however, with bone forceps and other means I managed to loosen and extract three-quarters of the necrosed femur, and soon had the satisfaction of having the limb securely placed in my birch-bark splint, snugly supported therein by numerous pads made by tucking moss into lint, and so arranged that they could be replaced easily without disturbing the quietude of the limb as they became soiled by discharges. She was then removed from table to the lounge made for the purpose, where she must lie for five or six months, and so constructed that by removing a slat and separate cushion, also made of moss, micturition and defecation could be effected easily without disturbing the complete rest and immo-

bility of the limb. The estimable wife of the clergyman at the English Church Mission kindly undertook to see that all the most minute directions were carefully carried out, as to washing and dressing wound, etc. As this, I imagine, is the first case on record where the double operation of excision of knee joint and removal of a necrosed femur has been effected, I naturally held out small hopes of her recovery, and especially as she could not again be seen by a medical man, and with all her surroundings of an unfavorable character. However, I am happy to be able to state from information recently obtained from Mr. Hart, the school teacher, that she made an excellent recovery and is as healthy a girl as any in his school. Mr. McColl, the Inspector for the district, also seen her in his tour this summer and tells me there is very little shortening of the limb, and when standing no one would notice that there was anything wrong. Some pieces of bone found their way out along the drainage tube. The success I attribute mainly to the absolute immobility of the limb secured, and yet antiseptic cleanliness preserved. Cod liver oil, syr. ferri. iod. and generous diet was administered during convalescence.

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#### RARE CASE OF FOREIGN BODY IN NOSE.

BY J. MURRAY M'FARLANE, TORONTO.

Late Clinical Assistant to Dr. Myles, N. Y. Polyclinic.

Upon the 15th of Nov., the patient, Mrs. A., wife of a Toronto merchant, was sent to me, giving the following history. The previous day, feeling a slight irritation in her nose, she attempted to pick it with an ordinary pin, which immediately excited a fit of sneezing. In the first inspiratory effort, the pin escaped from her fingers, and was drawn into the nasal passages, causing great pain and further sneezing, each paroxysm giving rise to a severe pricking sensation. Her family physician was immediately sent for, but being absent from home, she was sent to a specialist, who, after an examination not finding the foreign body, concluded that it must have escaped unnoticed. The discomfort, however, continuing, the next day she was brought to my office. Upon inspection there was found a condition of acute coryza, the parts being so swollen that anterior rhinoscopy gave

negative results. The throat was so irritable that a posterior rhinoscopic examination was found impossible. I then thoroughly applied a 2% solution of cocaine, causing great retraction of the tissues in a few minutes, relieving the pharyngeal hyperæsthesia, permitting both anterior and posterior rhinoscopic examinations to be made with facility. Nothing could be seen of the pin, however, although the cavity was flooded with light by means of a small electric lamp, introduced into one nostril, also by the usual method of head-mirror and Argand burner.

The various parts were probed with the same result, and I was about to cease my efforts, thinking the pin had escaped. The sensation remaining, as is frequently the case, Mrs. A., however, was positive it had not done so, therefore I took a delicate probe and searched once more, with better success this time, for finally in the upper part of the nasal passages, almost in a line with the superior meatus, and quite out of view, my probe touched something which gave a metallic sensation, whereupon I introduced a delicate pair of forceps, and after one or two unsuccessful efforts, grasped the body and attempted to dislodge it; failing however, the forceps slipping and the parts becoming obscured by the blood which was dripping freely. A stronger pair of forceps next being used, I moved the body backwards and forwards, and finally after a hard effort, had the satisfaction of seeing the pin come into view, emerging from the mucous membrane where it had been imbedded for more than half its length with the point directed forward, which explained the difficulty of dislodging it, it having probably been forced in by the convulsive act of sneezing.

The peculiar points of the case were the almost inaccessible position of the pin, and the fact of its being buried beneath the mucous membrane for over half its length. After removal the parts were cleansed with a warm solution of Seiler's formula, and protected from the atmosphere by a spray of eucalyptol and benzonal, the patient experiencing no further discomfort.

**LUMBAGO.**—Dr. Lyman Watkins says (*Med Gleaner*) that ten drops of the tincture of gelsemium every four hours will almost invariably relieve that painful condition, or backache commonly called lumbago.

## Correspondence.

To the Editor of the CANADA LANCET.

SIR,—I was much pleased with your remarks upon diphtheria in your Sept. issue. I remember some twelve years ago an article being read upon this subject before a medical society, when eleven of the thirteen members present, all engaged in active practice, declared as their conviction that the membrane of diphtheria bore the same relation to the disease as the eruption upon the skin to scarlatina.

The deductions of Trousseau, more than sixty years ago, made by the light of classical research alone, are thus confirmed by the most advanced scientific investigation of to-day, and should be read with care by every physician called upon to deal with this fatal scourge.

When the profession wake up to the fact, that diphtheria is "*without doubt a local disease*," (the italics are yours,) and is to be met in its primary stage, by the prompt and frequent application of antiseptics and detergents, a new era will have dawned upon the treatment of this dreaded malady.

Yours truly,

Toronto, Oct., 1891.

W. SLOAN.

BARRIE, 9th Nov., 1891.

DEAR SIR,—Will you kindly permit me to write to you as connected with the LANCET, and having the chair of Materia Medica, at Trin. Med. College, to call your attention to the compressed triturates containing tincture of aconite from the States. Accidentally I discovered that the *U.S.P.* tinct. aconite was about three times the strength of the *B.P.* I have spoken to medical men who were using them and did not know this, and supposed they were of the *B.P.* strength, thereby giving three times more than they supposed. Also, the druggists I spoke to were ignorant of the fact. You will see how dangerous this is in Canada, where we use the *B.P.* strength; also in England, where some of those preparations are imported.

I am, sincerely yours,

A. ARDAGH.

[We are glad to have the attention of the public called to the above. We thought the difference

in strength of the various proportions was universally known; but there are so many of these preparations that no doubt confusion often arises. Thus we have (1) tinct. aconit. rad, dose  $1\frac{1}{2}$  to 4 minims, (2) tinct. aconit. (Fleming's), also made from the root, dose 1 to 3 minims, (3) tinct. aconit. foliorum, dose 8 to 15 minims, all of the U.S.P. While in the B.P. there is the tinct. aconit., dose 5 to 15 minims.—ED.]

### Selected Articles.

#### ADENOIDS OF THE NASO-PHARYNX IN CHILDREN—THEIR EFFECTS AND TREATMENT.

Within the past few years much has been written about adenoids of the naso-pharynx; and in the medical journals are many careful articles, whose object is to show the causative relation of these growths to numerous diseases of childhood, which, though they seldom threaten the life of the child, are very annoying to the parents, physician and child. Indeed, until the appearance of the above-mentioned articles, these were incorrectly treated—the treatment being constantly directed to the diseases as existing *per se* and *in se*, and never to them as merely symptoms of one common cause. Judging from the number of children one may see everywhere, whose faces bear unmistakable signs of the long continued existence of excessive adenoids in the naso-pharynx, the inference seems fair that many practitioners of medicine, busy with the greater ills that flesh is heir to, either fail to recognize the cause of these lesser troubles, or, if they bear it in mind, refuse to grant to it the importance it deserves.

The naso-pharynx is the Rome from which roads lead to the nose, and through the nose to the eye; through the Eustachian tube to the middle ear; through the larynx into the lungs; and lastly, through the œsophagus into the stomach and intestinal tract; and when this centre is the seat of excessive or diseased adenoid vegetations, it may become the source of disease in any one, or in all, of these organs; and, as a rule, affects more than one at a time. In considering therefore, the effects of untreated, excessive adenoids of the naso-pharynx, it may be well to look at (1) those upon the nose; (2) upon the eye; (3) upon the ear; (4) upon the lungs; (5) upon the stomach and intestinal tract.

The interesting questions involved in etiology and history of these growths will be reserved for a separate article.

1.—*Effects of the Presence of Adenoid Vegetations in the Naso-Pharynx upon the Nose, including*

*Nasal Cavity.*—These effects vary much according to the relative amount of the growths present, the duration of their existence, the condition of these growths—especially as a separate pathological process has or has not been super-added in them—the constitution of the child, both inherited and acquired, and the conditions of life to which it has been subjected, together with the anatomical peculiarities of the nasal spaces in different individuals.

One of the striking symptoms of the presence of these growths in children, especially young ones, is the annoying, more or less constant, discharge from the nostrils. It differs in many respects from the acute coryza, to which adults are subject. The child does not seem to suffer the same discomfort that accompanies acute coryza; the chilly sensations are absent, the eyes are not necessarily inflamed, and the discharge from the nose does not vary much in character from day to day; the cold in the head of the child seems to remain at one thing under certain conditions, for a long period of time. "He always has a cold in the head." At the same time, the child does not breathe through his nose, or he breathes through it but imperfectly. The turbinates are swollen; and sometimes it happens, either from constant pressure of the swollen turbinate against some prominent part, especially of the lower part of the septum, or from long accumulations of irritating mucous discharge, perhaps both, that an ulceration forms, and the turbinate and septum at this point grow together, and remain so as to be a constant factor in the production of "throat and nose" trouble.

Another evidence of the presence of these growths, and dependent upon the catarrhal discharge from the nose, is an inflamed condition around the entrance into the nostrils. This inflammation, though generally circumscribed sometimes assumes an eczematous nature, and if the adenoids be left *in situ* proves to be exceedingly difficult to cure.

That a nose should attain the full shape for which the plan was laid in the fœtus, it is necessary that there should be a constant change of the air in the nasal passages. The stimulus of the air passing over the nasal mucous membrane, is essential not only to the complete and regular development of the turbinate bones, but also of the nose bones, of the vomer, of the ethmoid, of the cartilaginous septum—and of the various parts entering into the formation of the nostrils. Fortunately it is rare that the obstruction to nasal breathing is complete; and, moreover, the obstruction, to a high degree, is confined chiefly to the earlier years of childhood. The development of the naso-pharynx, and the tendency that these growths have to become smaller as the child advances in years makes room for the passage of air through the nose. Where, however, adenoids have

existed in such quantity, or have been developed in such positions, or have been so affected by inflammatory processes, as to cause interference with free nasal respiration, the effect of the same is always felt in the development of the nose as a whole, and in the majority of cases, can be seen in the shape of the outer nose.

The *adenoid nose*, is essentially a weak one, and one showing signs of irregular and unsymmetrical development; and its shape often mars a face which would have had much beauty, had not the regular growth of the nose been interfered with. The delay in the development of the nasal bones causes a flattening of the bridge of the nose. This delay is due to lack of stimulus from the active advance of the septum. The nasal bone lacks support. In the same way the lateral cartilages of the nostrils—owing to disease of the nostrils during complete stoppage of the nasal passages and to their unequal use when one side of the nose is freer than the other, and to their want of full support from the septum—become usually developed, or are developed not at the proper planes to each other; and, as a result, the nostril-walls thicken, or at times are too thin in certain places, and lose their normal curves. The later development of the facial bones and of the nose, removes, in a great measure, many of these faults due to nasal obstruction; but where excessive adenoids have existed for a long period of time, the nose, no matter how vigorous its development after the restoration of nasal respiration, will always tell plainly its early history. The septum is also affected by the stoppage to nasal respiration, and a certain proportion of the cases of thickening of the cartilaginous portion, especially in its upper posterior aspect, can, I am inclined to think, be traced to the early existence of adenoids.

It may be of interest to mention here, in passing, two conditions, which, though I am unable to prove them to be directly, or indirectly, dependent the one upon the other, are often enough associated to make an observer wonder whether they are the results of a common cause; and, if so, whether the one condition may not have some influence in determining the other. The two conditions are:

1st. A hypertrophic state of the upper and posterior part of the cartilaginous septum of one side—so hypertrophic that it furnishes an obstruction to the direct passage of air from the nostril entrance to the middle and superior turbinates, and often preventing any anterior view of the middle turbinate.

2nd. A marked diminution of the power of hearing on the side corresponding to this enlargement of the septum, as compared with the hearing power of the opposite side; and this when the air passages of the lower and posterior parts of

the nose are apparently sufficiently free. Often, in older children, and in adults, these adenoids, or their remains, are the cause of a hypertrophic condition of the turbinates, which it is useless and unscientific to try to reduce with acids or the cautery as long as the adenoids are left in the nasopharynx, and which disappear without further treatment as soon as they have been removed. Epistaxis is of not infrequent occurrence in these cases, and it is probable that its source is to be sought in some small ulceration caused either by the nature of the catarrhal discharges or by pressure of the swollen turbinates.

II. *Effects upon the Eye.*—In writing of the delay in development of the nose bones caused by nasal obstruction, mention was made of the ethmoid bone, whose orbital plate furnishes not an inconsiderable part of the bony surface of the orbit. It is in the highest degree probable, that continuous nasal obstruction in early childhood delays the development of this plate, as well as of the rest of the ethmoid bone, it being an integral part of this bone; and, if so, the orbit is necessarily prevented from developing properly. This is a highly important point, for the eyeball is contained in the orbit, and the shape of the orbit necessarily determines, to a greater or less degree, the shape of the eyeball.

And just here, I believe, is to be sought the explanation of the fact, that the majority of children who have suffered from nasal obstruction, and post-nasal adenoids, as the chief cause of this condition, are far-sighted, and to a degree higher than can be explained by inheritance. The eyeball being in the orbit is influenced in its development within certain limits, though the laws of inheritance stamp their plan upon it while it is in embryo, by the development of the orbit. And here, again, in the faulty development of the orbit, is to be found the explanation of some of those sporadic cases of astigmatism which one meets with from time to time—that is, certain of those cases of astigmatism which are not inherited, and which cannot be explained by influence of previous inflammatory conditions of cornea, etc. I will cite one example here which is striking enough.

Mr. X, aged 22, has a father, mother, three brothers and a sister whose eyes may be called normal, showing but a slight amount of hyperopia; no myopia in the family. Mr. X, himself, shows marked astigmatism in one eye, while his nasal history is one of obstruction to a greater or less degree, greater in one side of the nose than the other, and lasting for a number of years.

Most writers on refraction of the eye say that in many cases the degree of hyperopia decreases as the child attains its growth. The degree of nasal stenosis, due to post-nasal adenoids, grows less and less as the child grows older; and so more and more of one of the necessary stimuli to



the growth of the nose bones is furnished; and the nose bones, with the orbit, obtain their size and shape as performed in embryo, except in so far as they have been influenced by contrary external conditions, and, among these, nasal stenosis. I would even go further and find in this unsymmetrical development of the orbit, one of the causes of want of equilibrium in the eye muscles, giving rise to hyper-, ex- and es-ophoria—especially the first of the three.

Among the *inflammatory affections of the eye*, which are of so frequent occurrence in children suffering from post-nasal adenoids that a connection between the two may be considered as beyond question, may be mentioned phlyctenular keratitis, phlyctenular conjunctivitis, catarrh. conjunctivitis, marginal blepharitis, and eczema of the lids, which last may even extend over the whole of one side of the face, and often is combined with eczema of the outer ear.

The *phlyctenular troubles* deserve a few words. The last articles on these troubles, in discussing their etiology, mentions "age, occurring chiefly in children," "unhygienic surroundings," "astigmatism," "bad and improper food," as the probable causes. While it is true that phlyctenes occur most frequently in children whose surroundings are "unhygienic," it is doubtful, to a high degree, if astigmatism has anything to do with their production; nor has "bad and improper food," further than that "bad and improper food" tends to lessen resistance to disease; nor will youth and unhygienic surroundings produce phlyctenes of the cornea or conjunctiva. In the vast majority of cases of children suffering from phlyctenular troubles, there will be found a coincident rhinitis, and behind this, unhealthy adenoid vegetations. The picture presented by these cases is so characteristic, that once recognized, it is not easily forgotten.

*Phlyctenes and a Running Nose.*—Generally the child has "had a cold for a long time" before the eye trouble begins. Some writers believe that scrofula predisposes to phlyctenular eye inflammations. It is true that the phlyctenes occurring in scrofulous children are more obstinate to treatment, have a greater tendency to recur, and to produce more lasting damage to the eyes, than do those occurring in non-scrofulous children; but this is only because the improperly treated rhinitis of scrofulous children is severer in its manifestation and more lasting in point of time than is the improperly treated rhinitis occurring in non-scrofulous children. In the majority of cases of phlyctenular troubles in children, where the affection is confined to one eye, it will be found on examination that the rhinitis on that side is apparently greater in degree than on the other side; i. e., that the discharge from the nostril on the side of the phlyctenular trouble is more pro-

fuse than that on the other side. This may be due to one or both of two causes—either the rhinitis is really more severe on this side, perhaps from some anatomical intra-nasal condition; or the two sides of the nose, having been at first equally affected, the second side has become more inflamed after the appearance of the phlyctene in the eye; for the phlyctenular affections cause a hyper-secretion of tears, and of a nature often severe enough to inflame, even to bleeding, the skin of the outer canthus of the eye, and a greater proportion of these tears are carried into the nose, where their irritant action upon the nasal mucous membrane will readily produce excessive acute catarrhal discharge from the mucous membrane.

It is highly probable, then, that the excessive discharge from the nostril on the side corresponding to the eye affected, is due to the hyper-secretion of tears. This is rendered even more probable when one considers the cases of acute monolateral, non-purulent conjunctivitis, which are accompanied by a severe monolateral rhinitis.

The *cause*, then, of phlyctenular eye affections in children, in the vast majority of cases (I can imagine other causes), is to be sought in the catarrhal condition of the nose—in the catarrhal discharges therefrom, which, in turn, are due to the unhealthy conditions of adenoids present in the post-nasal space. Whether the phlyctenular trouble be due to the germs which find a culture medium ready prepared in the altered and often stagnant secretion of the nasal spaces, or to a chemical product, the result of disorganizing changes in these nasal discharges, I am unprepared to say; but that it is due to one of the two, I feel convinced.

The mode of transference of this secretion from the nose to the eye may be either through the lachrymal canal, which, I think, highly improbable; or directly from the nostril entrance into eye externally, either by the child rubbing the nose and then the eye, as he is frequently seen to do, or through the agency of the pocket handkerchief, or by the pillow becoming saturated for a certain space with the nasal discharges while the child is asleep, and then the child turning over, so that the eyelids touch this space. This latter, i. e., moistening of the pillow with the discharges from the nose in these cases, is often. It is probably the cause of the moist eczematous condition of the posterior aspect of the auricle, and of the lobe of the ear which is found accompanying, not infrequently, phlyctenular conditions of the eye. It is not the rule for phlyctenular troubles to occur where the parents are at all careful about removing the discharges from the nostril-openings as soon as they appear, and where they teach the child to keep his nose as clean as he can. These troubles occur chiefly where the children have been greatly neglected, owing either to the ignor-

ance of the mother, as in the cases of negroes, or to her being obliged to do so much work for her daily bread that she cannot give proper attention to her children, as in the cases of factory operatives.

*Catarrhal conjunctivitis* is not infrequently found accompanying a rhinitis due to adenoids. This conjunctivitis may be confined to one eye, or may affect both eyes at once, or one eye after the other. Sometimes it co-exists with a phlyctenular condition of the cornea-scleral margin. In one case which came under my observation, the child had a phlyctene of the cornea, which healed entirely under yellow oxide of mercury ointment; several months later, a monolateral catarrhal conjunctivitis, when getting well, was followed by a crop of small styes.

*Marginal blepharitis* is also at times found as a condition consequent upon the presence of a continued rhinitis due to adenoids of the naso-pharynx; though in this case I would look for an additional cause besides the secretions of the nose.

(To be continued.)

#### ON IMMUNITY.

Since Pasteur's celebrated discovery that it is possible to make animals immune against chicken cholera and other diseases by the use of attenuated vaccine, the nature of immunity, whether natural or acquired, has attracted to an ever-increasing extent the attention of bacteriologists. Year by year new theories have been brought forward to explain these phenomena. It is not my intention to attempt to discuss these earlier theories, partly because I prefer to leave this to abler hands, partly because the more recent theories on this subject tend rather to supplement than to exclude their predecessors. I should like, however, to point out how our modern views on this subject are acquiring greater precision and definiteness as time goes on. The view that acquired immunity was due to an alteration of the metabolism of the tissue cells, either in general or at the seat of infection (Grawitz, Buchner), is now known as the phagocyte theory, with which the name of Metschnikoff will ever be honorably connected. The supposition of Chauveau and others that immunity was caused by the presence of some unknown substance of bacterial origin is now overshadowed by the results obtained by many workers who have actually found bacteria-killing substances in immune animals, whose nature and origin, however, appear to be very different from what Chauveau's theory might have led us to expect. It is to a consideration of this view of the nature of immunity that I propose chiefly to devote my paper.

Towards the end of 1888, Nuttall discovered that various bacteria are destroyed when mixed with fresh blood or blood serum, and, further, that this destruction cannot be ascribed to the action of cellular elements, but rather to the fluid part of the blood. This discovery (which really arose from the German criticism of Metschnikoff's phagocyte theory) was soon followed by the work of Buchner and Nissen, and these observers came to the conclusion that this bactericidal action of the cell-free blood serum is a weighty factor in the conflict between the organism and the microbe. A further confirmation of this view is to be found in the interesting discoveries of Bouchard. He first showed that the blood serum of an ordinary rabbit will serve as a culture medium for the bacillus pyocyaneus. If, however, a rabbit is made immune against the disease produced by this bacillus, its blood serum has acquired the power of attenuating and even destroying the microbe in question. Thus it was shown that by making an animal immune against a disease the bactericidal action of its blood serum was greatly increased. Similar results have since been obtained with the microbes of cholera, anthrax, and other diseases. Among these must be mentioned the recently published work of Emmerich and Mastbaum on pig typhoid. Not only have these observers found that the microbes of this disease are killed by the blood serum of rabbits that have been rendered immune against it, but they have successfully employed such serum to cure the disease after it has appeared in other susceptible animals. These discoveries concerning the bactericidal action of blood serum led to another of a very different, and I may say unexpected, nature. I refer to the work of Behring and Kitasato on tetanus and diphtheria which appeared at the end of last year. With these last named diseases our attention is at once drawn from the microbes to the poisons they produce. The microbes of tetanus and diphtheria do not spread through the body of the infected animal, as is the case with anthrax. On the contrary, they remain in the immediate neighborhood of the seat of inoculation. There they elaborate their deadly poisons, which, when absorbed into the system, produce, as is well known, various disastrous effects. For instance, an inoculated guinea-pig will in some cases develop typical diphtherial paralysis long after the last diphtheria bacillus has vanished from its system, and practically the same clinical effects can be produced by an injection of a minute dose of the poison made by the diphtheria microbe as by the microbe itself. Fraenkel, Behring, and other observers agree that scarcely any tolerance can be obtained by successive inoculations of minute doses of the unaltered diphtheria poison; consequently such a procedure can scarcely be expected to lead to a sure way of producing immunity against this disease. How then, it may be

asked, can we ever hope to find a cure for diphtheria? Suppose, for example, a substance was discovered which could kill the diphtheria microbe without harming the living animal tissues, how could this cure disease when it has once appeared? The blood serum of rats possibly contains such a substance; but what could be the use of using it to destroy diphtheria bacilli in a patient if it leaves untouched the diphtheria poison, which, in the absence of the microbes that produced it, is quite capable of destroying the health of the patient?

The above-mentioned work of Behring and Kitasato disposed of the pertinency of these questions. These bacteriologists succeeded in making rabbits immune against tetanus and diphtheria. They found that the serum of a diphtheria-immune rabbit (to confine our attention to one of these diseases) exerts no bactericidal action on the diphtheria bacillus. It possesses, however, the remarkable power of destroying the poison produced by this microbe. In this anti-toxic power of such serum we at once see a possibility of curing tetanus and diphtheria (for the above statements hold good for both diseases), and, as a matter of fact, it has been found possible to cure either disease in mice and guinea-pigs. Indeed, Behring has cured mice of tetanus in which the disease had so far progressed that several of the limbs were in a condition of spasm. Gamaleia has obtained results with the poison of the vibrio *Metschnikovi* which go to confirm these of Behring and Kitasato. He found that this poison is destroyed by the blood serum of the rabbit, but not by that of the guinea-pig, these animals being by nature respectively refractory and susceptible to the attacks of this microbe. Thus we see that the discovery of the bacteria-killing power of blood serum, besides suggesting a new direction in which practical results may be expected, leads us to a new theory of immunity, which may be stated as follows: "Immunity, whether natural or acquired, is due to the presence of substances which are formed by the metabolism of the animals rather than by that of the microbe, and which have the power of destroying either the microbe, against which immunity is possessed, or the products on which their pathogenic action depends." It may be noted that this theory, as I have stated it, does not attempt to exclude other factors. It is possible—or, indeed, probable—that in some animals immunity against some diseases depends either wholly or in part on other causes.

The question now arises, What is the nature of the substances on which this bactericidal action of blood serum depends? Buchner attempted an answer to this question two years ago when he first attacked the subject. He carefully tested the action of each one of the known constituents of blood serum on bacteria. Not one of them showed the slightest bactericidal action. He successively

showed that the bacteria-killing action of blood serum could not be ascribed to salts present, to traces of fibrin factors, or to the other proteids of serum. Consequently he arrived at the somewhat curious conclusion that this power of destroying microbes possessed by blood serum was due to a remnant of the "vitality" that had been possessed by the blood-plasma from which the serum was derived. It is difficult to see in what sense of the word such a statement is an explanation of the bacteria-killing power of blood serum, and when I first read it I was at once reminded of Professor Huxley's comparison of "vitality" with the idea of Martinus Scriblerus, who explained the operation of the meat-jack by its inherent meat-roasting power, and scorned the materialism of those who sought to explain its action by some hidden mechanism in the chimney. Another possibility existed—namely, that Buchner had overlooked some constituent of blood serum, and that to this unknown constituent the bacteria-killing power of blood serum was due. It would lead me too far to attempt to detail the theoretical considerations that led me to suspect that a particular ferment-like proteid known as cell globulin *B* was the substance in question. At any rate, I tested its action on anthrax bacilli, and found that it possesses the power of destroying these microbes. I further found that similar substances were present not only in animals that are naturally immune against anthrax, but also in those that are susceptible to this disease. To those substances I have given the name of *defensive proteids*. In my published papers on this subject I have noted various similarities in the bactericidal action of these substances and that possessed by blood serum, and these resemblances are such as to leave little room for doubt that the bactericidal action of blood serum is due to the presence of these defensive proteids.

It is obvious that the mere presence of these bodies in the animal organism does not compel us to regard them as a means of resistance to microbe invasion. Before we can regard them as a real factor in the production of immunity it must be shown that the defensive proteid of a refractory animal is more active or is present in a larger quantity than is the case with an animal that is susceptible to a given disease. This very necessary proof I sought to obtain by a study of the defensive proteid of the rat. This animal is known to be highly resistant to anthrax. Behring, in 1888, showed that its serum is more alkaline than that of any other animal that he examined; further, that it has the power of killing anthrax bacilli, which power is lost when the serum is neutralised. He came to the conclusion that the immunity of the rat to anthrax is due to this high alkalinity of its serum, but was unable to isolate the alkaline substance involved. Naturally, my work on defensive proteids enabled me to attack

this question from a more favorable standpoint, and I soon found that this serum contained a proteid body possessing a well-marked alkaline reaction and a power of destroying anthrax bacilli. Further, when injected into mice, along with fully virulent anthrax spores, it would prevent the development of the disease. On the other hand, defensive proteids of animals susceptible to anthrax can exert no such protective power, and consequently these experiments indicate a difference in the mode of action of defensive proteids from immune and susceptible animals respectively. Further, the amount of defensive proteid present in a rat can be diminished by those causes which are known to be capable of lowering its power of resisting anthrax. For instance, Feser states that rats become susceptible to anthrax when fed on a vegetarian diet. I have obtained similar results with wild rats. The ordinary white rat, however, I have found to be generally refractory to anthrax on any diet, and always the defensive proteid can be obtained from its spleen and blood serum. With the wild rat this is not the case. In one experiment eight wild rats were used; of these, four were fed on bread and meat, the others on plain bread, for about six weeks. Then one rat of each lot was inoculated with anthrax; of these, the one that had been subjected to a bread diet succumbed. The remaining rats were killed, and it was found that while the spleens of the flesh-fed rats contained abundance of the defensive proteid, only traces of this substance could be obtained from the spleens of the rats that had been fed on bread alone. A similar result was obtained in other experiments.

These facts appear to me to prove that the defensive proteid of the rat deserves its name, in that it tends to preserve it from the attack of the anthrax microbe; in other words, that this substance is, at any rate, a part cause of its immunity against anthrax.

Since the publication of my work on defensive proteids, Buchner has abandoned his view that the bacteria-killing power of blood serum is due to a remnant of vitality, and in a paper recently published he admits the importance of defensive proteids, and suggests for them the name "alexine." Certainly, if it were necessary to re-christen "defensive proteids," this name would be very appropriate. It would, however, be convenient to form names for the different classes of defensive proteids, and I do not think it would be premature to do so now. Defensive proteids appear to be ferment-like, albuminous bodies, and it is extremely unlikely that we shall for a considerable time be able to classify them by any other than physiological tests. From this point of view it is possible to divide them into two classes: first, those occurring naturally in normal animals, and, secondly, those occurring in animals that have

artificially been made immune. For these two classes I propose the names of "sozins" and "phylaxins." A "sozin" is a defensive proteid that occurs naturally in a normal animal. They have been found in all animals yet examined, and appear to act on numerous kinds of microbes or on their products. A "phylaxin" is a defensive proteid which is only found in an animal that has been artificially made immune against a disease, and which, so far as is yet known, only acts on one kind of microbe or on its products. Each of these classes of defensive proteids can obviously be further sub-divided into those that act on the microbe itself and those that act on the poisons it generates. The sub-classes I propose to denote by adding the prefixes "myco-" and "toxo-" to the class name. Thus, myco-sozins are defensive proteids occurring in the normal animal, which have the power of acting on various species of microbes. Toxo-sozins are defensive proteids also occurring in the normal animal, having the power of destroying the poisons produced by various microbes. Myco-phylaxins and toxo-phylaxins similarly will denote the two sub-classes of the phylaxin group. —E. H. Hanken, B.A., in *Lancet*.

#### ERRORS IN DIAGNOSIS.

I ask permission to say that I stand here now as a conscript rather than as a volunteer. I have no unique or striking cases that I desire to communicate, and I am not conscious of possessing any new development or theory of disease struggling to find utterance. When, therefore, I consented to read a paper to-day, I thought that, next to endeavoring to advance the general stock of knowledge, the best course to adopt might be to try to add to the security of that which we have by pointing our errors into which I and others have fallen. Having yielded in this matter, chiefly to my friend Mr. James Worthington's pressure, and having mentioned the subject I should probably handle, he replied to me in this pleasant way: "By the way, do you remember a particular case in which you made a great mistake?" This made me pause, and I reflected that, if many of my friends here to-day should, as they probably can, round on me in this prompt fashion, I should have a bad quarter of an hour, and should repent of my rashness. However, I resolved to persist in my intention. I am willing to offer myself as an oblation to the advancement of science, and I even challenge Mr. Worthington, when I have done, to describe this case in which I was so mistaken, because it is clinically interesting, as it led to an error in treatment which he had the sharpness to detect and the skill to rectify.

Confession of error, however, need not imply blame. Mistakes in diagnosis may be due to various causes—to inherent obscurity of signs and

symptoms of disease, to misleading statements by patients or malingerers, or to our imperfect physiological knowledge; but in addition to these inherent causes of error, mistakes too frequently arise from the carelessness or the ignorance of the surgeon. We may, perhaps, divide medical men into two classes, those who are over-cautious and those who are over-confident. The over-cautious are less often wrong than the others, but they labor under a great disadvantage, for a patient who sees that a doctor cannot make up his own mind is apt quickly to find somebody who can. There is an exception, however, to this rule: an eminent London surgeon or physician can withhold an opinion and plead for suspense of judgment without forfeiting the confidence of the patient, while the general practitioner would at once lie under the imputation of ignorance. I was calling one day last year on a prominent surgeon in Liverpool; he had a patient at the time in his consulting room with a doubtful tumor of the breast, and he invited me to examine it. I asked my friend to give his opinion, and he replied: "I think I have reached a position here which entitles me to say I don't know what it is."

The over-confident men, men who are cocksure, who in their own opinion never make mistakes and who pronounce their decision boldly, are, in my experience, very often wrong, and when they are wrong they are palpably and hopelessly enveloped and beyond friendly extrication. The cautious man who is in error has probably left himself a loophole of escape through which he can in some measure save himself, but the cocksure man stands convicted by his own bold declaration, and his only alternative is to declare that he has been misunderstood and that after all he really saw the true bearing of the case.

In my student days I was clinical clerk to a distinguished physician of the cocksure type. A man had died in the hospital of peritonitis, as proved at the *post-mortem* examination. The physician examined the general condition and took his leave; he constructed an ingenious theory to explain the cause of the inflammation, but he did not know, what I discovered after he had left, that there was a malignant stricture of the rectum. This was carefully removed, and the following day at the clinical lecture, after the professor had got well beyond the etiology of the disease, the specimen was presented on a plate, with many apologies for being late; there was a momentary halt and confusion, but our over-confident teacher quickly recovered himself, and asserted boldly that he had had a strong feeling that disease of the rectum might be present, and he thought that he had mentioned it.

This same physician made another bad shot; the case is historical, and is worth mentioning. Mr. Liston was suddenly attacked with hæmop-

tysis to an alarming extent, the source of which could not be explained by Sir Thomas Watson and other men of note who examined him; they could find no physical signs indicative of aneurysm until signs of pressure on the windpipe and on the recurrent laryngeal nerve made the diagnosis of tumor or aneurysm evident, and this was only a short time before his death. The over-confident physician I have mentioned, however, at an earlier period of the case, declared that there was evidence of tuberculous consolidation at the left apex; he attributed the bleeding to this cause, and prescribed accordingly; but when I made the post-mortem examination and found no disease whatever of the lung, but an aneurysm of the aorta situated precisely behind the centre of the sternum, the physician declared that he had suspected the existence of aneurysm or tumour, which I, who was present at the consultation, can declare he never mentioned; and I have documentary evidence to prove that, in his opinion, Liston's case was one of pulmonary tubercle.

I am tempted to allude briefly to one more mistake of this self-confident physician. When I was acting as demonstrator of anatomy at University College I was asked to make a post-mortem examination of a gentleman who died very suddenly; he and Dr. Roots were hurriedly summoned, and arrived at the house together, but not until after the death of the patient. They heard the history of the seizure, and gave the opinion that apoplexy was the cause of death.

Just at that time Mr. Paget was giving a course of lectures at the College of Surgeons, on Pathology, which I was attending. Amongst other subjects, he dealt with fatty degeneration of muscular tissue, and I had in my mind his clear and vivid account of this change. In conducting the post-mortem examination I was somewhat taken aback to find that the brain was entirely healthy, and that there was no indication of the apoplexy of which it was supposed the patient had died. Pursuing the inquiry, I found the heart large, soft and greasy, and under the microscope exhibiting in an extreme degree that fatty degeneration which Mr. Paget was then describing. My eyes were opened wide at this discovery; the subject so well understood now, was new at that time—more than forty years ago. I thought the matter well over, and saw its important clinical bearings. Other similar cases soon occurred, showing the same pathological appearances, and I felt sure that I was on the path towards valuable results. I soon found, however, that my old friend, Dr. Quain, was working on the same lines, and I retired from the inquiry, giving over to him the cases and notes which I possessed. I only allude to this matter now because it may interest our honored visitor, Sir J. Paget, to know how quickly his excellent teaching began to bear fruit.

There is, perhaps, another class of medical men who are apt to fall into errors, not from carelessness or ignorance, nor from too much caution or over-confidence. Rather they are men of argumentative ability, of subtle thought, and of much learning, prone to search for hidden and remote causes when plain ones lay straight before them, and they are fond of constructing cunning theories when common sense and experience will easily explain all. They lack that faculty of estimating the true value of this or that symptom, that intuitive insight which may be designated as sound judgment. Oliver Wendell Holmes has illustrated this class in a very humorous way when he makes the hero of the breakfast-table consult Dr. Benjamin Franklin about a discoloration on his forehead, the result of a slight bruise; the learned young doctor examines it in every possible way, goes elaborately into the family history, hints that it may be a case of morbus Addisoni, and explains fully the nature of that disease. The patient is alarmed; but his landlady eases his mind, applies a vinegar cloth, and the disease quickly subsides. The patient moralises on the matter thus: "Science is a first-rate piece of furniture for a man's upper chamber if he has common sense on the ground floor; but if a man hasn't got plenty of good common sense, the more science he has the worse for the patient."

I well recollect some years ago visiting a case for a medical friend now diseased. The patient was rich, indolent, lived in a fine house, and fared sumptuously every day; he had a swelled and inflamed foot, and putting these conditions together, my friend informed me that it was a case of gout. Probably the aspect of things had altered somewhat between his visit and mine, but it was obviously not gout at all, but ordinary phlegmonous cellulitis, which spread up the whole limb and ended in suppuration and sloughing of the cellular tissue which nearly cost the patient his life.

Let me, however, advert briefly to one or two of the diseases, which in my observation have been most frequently overlooked or mistaken: and I would give the first place to diabetes, a disease which manifests itself with so few objective symptoms and in such a variety of ways. Cataract; as we well know, is often the accompaniment of diabetes, and I have heard Sir W. Bowman say that he had in a vast number of cases recognized diabetes—before unsuspected—by the peculiar appearance of the opaque lens. The coexistence, too, of boils, and carbuncles and of gangrene of a toe or finger—or even of suppuration of a joint of a toe or finger—with diabetes is common and familiar enough; and I have seen quite a number of cases of so-called prostatic disease in old men in which the frequent micturition depended not on the readily suspected hypertrophy of the gland, but simply on the fact that, having a large quan-

tity of urine to discharge, the bladder required frequent relief, and it is well to remember that this large quantity of urine and frequent micturition, though commonly due to ordinary diabetes, is occasionally the effect of diabetes insipidus. So, too, the coexistence of diabetes and lithic acid gravel and stone is not uncommon, and should be borne in mind, for the combination is formidable, and may prevent the cure of the otherwise curable stone.

The mention of stone leads to the remark that next to diabetes the presence of stone in the bladder is perhaps most frequently either overlooked or undetected. There is no surgeon living—no matter how great his experience and his manipulative skill may be—who does not occasionally fail to detect a stone that exists in the bladder. I plead guilty to this myself, for I have had it brought home to me, and have felt not a little chargin and self-reproach at my shortcoming. I am not going to describe the various methods of sounding for stone, but I wish to allude to one source of mistake only, which I have met with over and over again. I can best illustrate it by a case. A London hospital surgeon who was spending his holiday on the coast near Cromer met with a sturdy old fisherman who had all the symptoms of stone. He induced the man to go to his London hospital, but he was surprised that, when there, no stone could be detected; he examined again and again, and called in one or more of his colleagues, and eventually sent the patient home with the opinion—afterwards expressed to me—that malignant disease of the prostate was probably the cause of his symptoms. Yet this man had a stone which was successfully removed by lithotomy in the Norwich Hospital, and the explanation of failure to find it I believe was this: the patient was a tall fat man, aged 72 years, with an enlarged prostate, and the bladder was very deeply placed and distant; an ordinary sound would go to its usual extent, and could be partially rotated, but I soon found that it required considerable further introduction and even to push back the flexible part of the urethra on the sound in order to reach the bladder; when it was reached, the stone could not be missed, but I have no doubt that my London friend had never passed the sound fully into the bladder, but had only examined the deep prostatic sulcus, and the limited movement of the sound he probably attributed to a contracted bladder.

I am warned by time that I must forego the mention of the mistakes and difficulties which so frequently occur in the diagnosis of tumours; whole chapters—even volumes—could be usefully written on such a subject; so, too, on the detection of feigned diseases, but I will conclude with the mention of one of the latter kind which has found a place in the standard literature of surgery.

In the third volume of Brodie's miscellaneous works is a description of what he calls "dry or white gangrene of the skin." A portion of skin of the size of a shilling, or larger, dies, and turns white, or dries in an amber-colored, horny slough, and is separated by ulceration; the wound heals, but a succession of these mortified patches follow one another, and seem interminable. He gives three cases, and showed in lecture a wax model of one of them; all the patients were young women with anæmia and irregular menstruation; little is said of the treatment pursued except that it was not very effectual, and the patients left the hospital and were lost sight of.

How many of us have ever seen a case of white gangrene of the skin? One such came under my notice long ago, when I was house-surgeon at University College Hospital. It tallied exactly with Brodie's description; piece after piece of skin about the size of a shilling or half-a-crown turned white, necrosed and was separated, and the wound healed. The patient was a young woman, and she was the object of great attention by the surgeons and the students because of this rare and peculiar disease, and because, too, she was very good-looking. She stayed in the hospital many months, then she left, and was lost sight of for a time. At length the history of the case was completed; she became an in-patient of the Brighton Hospital; there suspicion arose, a watch was set on her, and the cause of the disease—which in London was explained by some ingenious hypothesis in more than one clinical lecture—was found to be a penny-worth of strong sulphuric acid and a glass rod! She was ignominiously expelled from the hospital, and I believe she committed suicide soon after.

I have always thought that Brodie's white gangrene of the skin had no better foundation as to its etiology than, and probably the same as, existed in this case. I may, however, be mistaken, and I give this opinion with diffidence; but if I am right—if so astute, so careful, and so experienced an observer as Sir B. Brodie was mistaken—we may all take comfort in the reflection that neither age, learning, nor experience can prevent occasional error. The older we grow the more wary do we become; we know the pitfalls into which we may fall and probably often have fallen; whereas the young practitioner, who has not yet been much confronted with his own blunders, with the enthusiasm of youth and the complete teaching of the schools, is apt to be more sure of his opinion, more free in expressing it, and therefore more frequently in error. This, however, I may say, quoting the witty words of the late Master of Trinity College, "We are none of us infallible, not even the youngest."—William Cadge, F. R. C. S. in *Br. Med Jour.*

## THE INFLUENCE OF MATERIAL IMPRESSIONS UPON THE FŒTUS.

Although the belief in the influence of the maternal impressions upon the fœtus, which has existed long ago among all people, has found, and still finds, strong support from the greatest philosophers and most celebrated physicians, the subject has not yet found a proper place in science, being relegated to the region of delusions and fantastic fables. In the first place, the general belief in the influence of material impressions upon the fœtus found many opponents in the beginning of the eighteenth century, who began to prove that as between the mother and fœtus there exists no nervous connection; all such cases, principally connected by Sachs, Schroeck, Haller, and others, were either merely accidental or inherited. Afterward, however, the German writers made far weightier objection, namely, that every deformity, as the result of embryological defect, must be developed during a certain period of time, and for this reason cannot be the result of a momentary impression acting on the mind of the pregnant woman.

Nevertheless there have appeared from time to time, especially in the English and American papers, descriptions of cases seeming to prove the possibility of such influence of maternal impressions upon the fœtus. And what still more deserves our attention is that many of these descriptions are given by men who are known as conscientious investigators and critical observers. It is sufficient to mention the works of W. S. Lowman, T. Wetherby, Thomas Hedman, and many others, in which this subject has again been raised with great carefulness and criticism, and therefore we cannot yet regard this interesting and enigmatic subject as closed.

It is to be understood that by maternal impressions we do not mean the defects of development manifested by an arrest of the organism in the beginning of the embryologic state, but rather cases in which the psychical impressions are stamped on the development of the fœtus.

The following case, observed by myself, directed my attention to this question:

The wife of one of my friends, being in the second month of pregnancy, was frightened by the wound of her little son, four years of age, which he received on the forehead from a fall against the edge of a clothes-press. The wound, however, was not dangerous, but it alarmed the mother. In due course she was delivered of a female child, who had in the same place a red scar, showing the exact resemblance of that of her brother's.

Professor L. Neugebauer described, in a Polish



paper, the following two cases, which I will cite in his own words :

"In the Milan Anatomical Museum there is a specimen of a female child, who died at the age of three months. The skin of this child, from the head to the navel, is black-brown, and covered with hairs, and besides that there are spots of the same color in other places. It is curious that in the brain also are some dark spots. The mother of this child related to Professor Billi, previous to the birth of the child, and he personally communicated the facts to me, that she had once, while pregnant, looked intently for some time at a monkey that was being exhibited in the street." I must add that the monkey was dressed in short trousers, leaving his upper parts bare. "I, on my part," continues Professor Neugebauer, do not doubt the possibility of the influence of maternal impressions upon the foetus; my own son serves me as a proof of it. I once hurt my left leg on the inside by a thorn while bathing in a river. On my return home I dressed the wound. At the moment when I was cleaning it my wife, who was then in the first month of pregnancy, entered and was frightened by it. The boy, born in due course, has, in the same place where I have the scar resulting from the wound, a mark of the same shape and color."

Dr. Edward Garraway relates the following very interesting case: "A lady of refined taste was in the habit of sitting before a group of statuary, with one little figure of which she was greatly enamored. This was a Cupid reposing, his cheek resting on the back of his hand. When her baby was born his resemblance in form and feature to the little Cupid was at once striking. On seeing him the next day in his cradle, I perceived he had assumed the precise attitude of the statuette—the cheek upon the back of the hand; and this position he invariably, and, of course, involuntarily, adopted during sleep, not only throughout infancy, but up to advanced boyhood, when I lost sight of him."

Dr. James Bryden relates the following case occurring in his practice: "A short time ago I attended Mrs. C— during her second confinement. After the child was born, the common question, Is it all right? was asked by the mother, and answered in the affirmative. Presently the nurse discovered that the great toe of the right foot was entirely wanting. The mother then related that, when she was in her fourth month of pregnancy she dreamed that a rat had bitten off her corresponding toe; and so vivid was the impression that she awoke screaming, and narrated the cause of her fright to her husband, who corroborated her statement. The veracity of both parties is unimpeachable."

The following characteristic case is related by Charles F. Williamson: "Mrs. D—, aged 30,

multipara, when four months pregnant, was opening the door of a shed in her garden, when a black-and-white collie dog pushed against her and ran away, having been shut up previously by her husband without her being cognizant of the fact. This made a deep impression on her at the time, and she continually, even to the time of her confinement, told her husband that her child would have a mole or be born disfigured in some way. So much did this prey upon her mind that her appetite failed, and she could not bear the sight of any animal, whether out of doors or inside the house. On September 26th I was sent for, and found a footling presentation, the right foot presenting. . . . I may say that when the right foot and leg were born there was great difficulty in keeping them warm, in spite of warm flannels. On examining the child the whole of the right thigh was covered by a mole from the groin to the knee, and entirely encircling the limb. The color was shiny black, and studded with long white hairs. There was another mole situated over the spine of the left scapula."

"About three weeks ago," writes John T. Hislop, "I was called into the country to attend Mrs. M— in her confinement. When I arrived at the house I found that the child had been born some considerable time, but the placenta had not yet been expelled. After removing this latter I was shown the child, a well-developed male, which had evidently reached the full term and could not have been dead many hours. The child's head was the extraordinary part, and exactly resembled a miniature cow's head. The occipital bone was entirely absent, the parietal bones only slightly developed; the eyes were placed at the top of the frontal bone, which was quite flat, and each of the superior angles of which was twisted into a rudimentary horn. The striking resemblance to, or, more correctly speaking, almost exact imitation of, a cow's head, was unmistakable. When, a few days afterward, I was able to speak to the mother on the subject, she told me how she had been terrified by a bullock when walking home from market during the second month of her pregnancy."

Dr. Charles W. Chapman is of opinion that the whole available material we possess should be collected and definite conclusions drawn from it. He states the following case: "A lady, in comfortable circumstances, aged twenty-four, and of no marked emotional temperament, engaged me early in 1883 for her second confinement. The patient was exceptionally robust, and her little girl, then nearly two years of age, was in every respect healthy. The patient informed me that early in her pregnancy she had seen a man begging whose arms and legs were all doubled up. The sight gave her a shock at the time, but she hoped no untoward effect would follow. I, of



course, endorsed her hopeful view of her case, and urged her not to trouble herself any further. In due course I was summoned, and on examination found a shoulder presenting. The time of day being that in which all my medical neighbors would be out, I persuaded the patient to allow me to turn without giving chloroform. The operation was performed with some difficulty. The child was an anencephalous monster. The extremities were rigidly flexed, the feet almost sole to sole, and the fingers firmly clenched. The child could only have been dead a few hours. The mother was, of course, desirous of seeing her child, but I dissuaded her from this by assuring her that although this child was imperfect, there was no reason why she should not be more fortunate next time. The patient made a good recovery and shortly afterward changed her residence. Four months later she became again pregnant, and unfortunately she frequently passed a man who was a partial cripple, living in the same road. This circumstance revived the patient's fears; but she did not appear to be much depressed and she was quite hopeful regarding her coming infant. The confinement took place at full term, and presented precisely the same difficulties as on the previous occasion. The child also was a counterpart of the last one, with the exception of the head, which was normal. After an interval of a few months my patient became again pregnant, and this time she was delivered of a strong and undeformed child."

It is impossible to cite all the cases published in the last few years. I have limited myself to the citation of some that seem to me to be more characteristic. I may add that the same facts are observed in the case of animals. Dr. Gray, curator of the British Museum, showed at a meeting of the London Zoological Society, on February 24, 1864, a chicken, whose bill and feet perfectly resembled those of a parrot. These monsters were very often born in his hen-house, and he explained them by the fright of the hen, caused by the cries of the parrot when the hen came near its cage.

My father, with whom I on one occasion spoke on the subject of maternal impressions, related to me that on his farm a peasant had a horse whose face greatly resembled that of a cow's. As I was interested in this question, I took the first opportunity to see the animal, and must acknowledge that its face presented a striking resemblance to a cow, only the horns were wanting. The peasant was known in the whole village as the owner of the horse with a cow's head. I may state that in Poland the peasants keep the horses together with the cattle in the same stable.

Can we, in view of so many facts, affirm that maternal impressions have no influence upon the fetus? To repudiate and deny so many facts,

because they are in contradiction with the universally accepted opinion, is to affirm, in one's conceit, that all laws that govern nature are discovered and known.

It is true that no nervous connection exists between the mother and the fetus, but does the absence of it exclude the possibility of the maternal impressions upon the fetus?

If we only consider the following facts, we have no reason to deny the influence of maternal impressions: 1, That every idea, every impression, must be materialized, or, in other words, it is impossible without the work of nervous tissue; 2, that there exist many phenomena which cannot be explained by direct connection with the nerves, as, for instance, the action of one mind upon another at a distance; 3, that a certain impression or idea can influence the function of our tissues or organs, as, for instance, fear can produce many disorders in our organism, even the thought of a lemon can produce abundant secretion of saliva, etc. Besides that, the modern psychologists and physiologists believe that the fetus, long before entering the world, is conscious of pain and physical satisfaction, and also gives expression to many impressions. These affirmations of psychologists are founded upon Luy's experiments, which prove that the placing of the cold hand upon the walls of the abdomen immediately produces movements of the fetus, and it is well known that the body is not a good conductor of warmth. It is also known that the light suddenly thrown into the eye of the mother, as well as a sudden noise, produces violent convulsive movements of the fetus, and Perez states as a fact that a certain woman, experiencing great fear three months before the birth of her child, felt convulsive movements of the fetus, and the child lived only a few months after birth, having very often, and without any external cause, sudden convulsive fits.

These are facts, proving that the fetus may unconsciously, but yet truly, express maternal impressions. But how the external or internal world acts upon the souls, half-formed and perhaps already possessing certain indistinct self-knowledge, is a very hard question, which cannot be quickly solved. According to Luys' the nervous cells are, during a certain time, in a state of vibration, produced by external impulses or impressions. If we agree with this writer, the question ceases to be obscure to us, or to exist in the region of imagination or fables. Besides that, it is known that deviation of the nervous fibre, during development, of even one-tenth of a millimetre will influence powerfully the structure and development of certain organs. In consequence of this, an impression, be it continuous or accidental, received during fetal life, influences the development of the brain and individual

organs; therefore only one strong momentary impression, even in a dream, received by the mother and transmitted by her, is sufficient to produce afterward a run of changes in the development of the foetus.

On my part I am thoroughly convinced that different psychical and physical defects, which till now have been ascribed to inheritance, are in most cases the results of moral impressions derived from the surroundings of the mother. Naturally not every woman bears children with traces of her impressions. If it were so—as Buffon remarked—what strange creatures and strange characters we would see then. Nature did not furnish every man with the same susceptibility of nerves, and therefore the impressions have not the same effect upon everyone. We must, however, admit that strong and lasting impressions must undoubtedly have influence upon the foetus.

It is a well-known fact that with animals the first male decides the influence upon the further offspring, so that the young ones descending from other fathers always show the traces of the first father. Probably the first male produces strong impression on the female that lasts very long. With plants these facts have not been observed, as Mr. Knight asserts. Probably also in the moral impressions of the woman lies the key to the secret why children of the same parents often entirely differ in character, temperament, capacities, appearance, etc. This difference, which can often be met with, stands in contradiction to the generally accepted theory of inheritance.—Dr. J. Drzewieki, Warsaw, Poland, in *Med. Rec.*

### CHRONIC RHEUMATISM.

*Gentlemen*.—I want to show you to-day this young girl, aged sixteen years, with a negative family history, who ten years ago had an attack of rheumatism when she also had an inflammation of the eye, which brought on a cataract. Since then she was free from rheumatism until after she moved from the country to Philadelphia, about one year ago. Not long after removing to Philadelphia, she began again with rheumatism, which was first felt only in the smaller joints of both hands and both feet, all the joints being affected almost simultaneously. At first the joints were tender to the touch, painful, more especially at night, somewhat swollen, and, perhaps, very little reddened. There was little or no fever present, and I may have stated that is one of the distinguishing characteristics of chronic rheumatism, which frequently follows acute rheumatism, though sometimes years later. Now she also tells us that during the last eleven months she has had exacerbations several times, with the symptoms named, and at other times was comparatively

free from them. That is also very characteristic of the course of chronic rheumatism. The disease is very much influenced by weather changes and by locality of residence. She lives, she thinks, in a comparatively dry home; but the fact that she began with rheumatic symptoms as soon as she removed to Philadelphia, and had not had rheumatism for ten years prior, goes to show that, after all, the house to which she removed may not have been so dry as it should have been, and, hence, may have caused rheumatism. For we do know that damp residences are frequently the cause of chronic rheumatism, as well as a leading factor in the causation of acute rheumatism.

It is a very important matter to decide as to whether you have a case of chronic rheumatism or a case of gout to deal with, and, then again, it is important to distinguish chronic rheumatism from so-called rheumatoid arthritis, which is not rheumatism at all, though an affection of the joints.

Rheumatoid arthritis is apt to occur later in life, and is a steadily progressive condition, one joint after another becoming implicated, without any decided subsidence in the local symptoms of a joint once affected. Cases of rheumatoid arthritis also result, by and by, in ankylosis of the joint, and there is greater deformity than we see here. The ends of the bones become enlarged and very much thickened, while the soft structures near the joint waste very much in rheumatoid arthritis; hence, the well-marked deformity that is almost universally present. Later, there is ossification of the soft structures around the joint, with complete ankylosis, and it is by this condition that you will often be obliged to distinguish between cases of rheumatoid arthritis and cases of chronic rheumatism. Partial ankylosis rarely occurs in far advanced cases of chronic rheumatism; they do have impairment of motion. You may find only limited motion in the joint; decided stiffness, with persistent enlargement; but you never have in chronic rheumatism, however far advanced, complete ankylosis.

You have now to distinguish from chronic gout, not always an easy matter. Gout is markedly hereditary; rheumatism is also hereditary, but not quite to the same degree. In rheumatism, you will generally have a history of exposure in a damp residence, as in this girl's case, or exposure out of doors to wet and cold. Not so in cases of gout. You, however, often get a marked history of over-feeding prior to an attack of gout. The attack of gout comes on at night, and, as a rule, affects the toes and smaller joints. No such history was obtained from this patient. These paroxysms last a much shorter time than an attack of rheumatism, either acute or chronic; you have, in gout, deformity and stiffness on account of the deposits of urates in the joints. In

gout, you have the urine much more implicated than in chronic rheumatism, and so also is the blood. If you are in doubt as to whether a case is one of gout or chronic rheumatism, examine the blood under a microscope for uric acid crystals; if you find these, you may be sure you have gout to deal with. This never occurs in cases of typical rheumatism, but does usually occur in gout. Uric acid crystals in the urine are pathognomonic of gout.

Much more might be said as to these diseases; I have given you only the leading points in the differentiation. The history is of course different in different instances. The history of this patient's case also points clearly to rheumatism. Since this girl came here in June she has improved. Her treatment has been the administration of four lemons daily, a teaspoonful of Rochelle salts once a day, and a tonic mixture consisting chiefly of tincture of calumba, before each meal. In cases of rheumatism, we attempt to maintain an alkaline condition of the blood, and we know, as physiologists, that the vegetable acids are the natural means for maintaining this alkalinity, so that the administration of lemon juice is a perfectly rational method of treatment. Besides this, we find that the so-called anti-rheumatic treatment in cases of chronic rheumatism, has really very little beneficial effect; far better is it to improve the nutrition of the patient; far better is it to give tonics, more particularly the bitter tonic. Additionally we may administer cod-liver oil. I think there is no better remedy in chronic rheumatism than cod-liver oil given continuously, provided that the digestive organs will tolerate it. When anæmia is present, we administer iron; a little iron would do this girl no harm, as she has some of the evidences of anæmia, viz.: pallor of the skin and mucous membranes; but since she has improved under the present plan of treatment, we will continue it until Professor Woodbury, whose patient she is, returns.—Dr. Anders in *Times and Reg.*

#### CATARRHAL FEVER.

This disease embraces two stages, the dry and the moist, and the indications for treatment are somewhat different in each.

To relieve the fever and coryza of the first stage antifebrin is a good remedy. It may be combined with quinine.

R—Antifebrin. . . . . gr. viij—x.  
Quinine, . . . . . gr. v.

M. This will generally insure rest and a moist skin.

A purgative,

R—Hydrarg. chlor. mitis, . . . . . gr. v.  
Ipecac, . . . . . gr. j.  
Rhei pulv., . . . . . gr. viij.

M. One dose to be followed by a dose of Epsom salts or castor oil if needed.

Order a bowl of hot water, add a few drops oil turpentine; let the patient inhale the vapor, a shawl or blanket thrown over the head to confine the steam. This often affords much relief. If the throat be sore apply turpentine to the fauces with a swab. After the purgative has acted give

R—Tinct. aconiti rad., . . . . . ℥j.  
Vini antimonii, . . . . . ℥ijss.  
Spt. ether, nitros., . . . . . ℥vj.  
Liquor ammon. acetatis, q.s. ad. ℥jv.

One-half teaspoon-to teaspoonful every two to four hours as indicated. Children four to five years of age twenty drops. Opiates are not good for this stage, but if there is much restlessness a dose of Dover's powder may be given. Antikamnia is better. Mustard should be used as a counter-irritant. One part of ground mustard to two of flour. It should be applied frequently during the disease, and when the mustard is not on, a poultice of wheat bran or cloths wrung out of warm water, and over it a layer of oiled silk. Quinine in moderate doses three times a day. The temperature of the room should be kept pleasant. Under this treatment the cough will become loose, fever will subside and dyspnoea and soreness of the chest cease in a day or two. Then give,

R—Syrup scillæ,  
Syrup senagæ,  
Syrup tolut.,  
Tinct. opii. camphorat., . . . . . āā ℥j.  
Ammonii chlorid., . . . . . ℥ij.

M.—Sig.—Teaspoonful every three or four hours. Digitalis comes in well and it may be added to the syrup as indicated.

In small children prompt and efficient measures are often needed to relieve the dyspnoea and other threatening symptoms. Give fluid extract ipecac in doses sufficient to insure free emesis. This may be necessary at intervals for several days, but it must not be given so as to keep the child nauseated, as this interferes with the measures of support, which are important, especially if the child have pertussis. In this disease we must support the strength by using stimulants and rich, nourishing food, and they are indicated early. Besides the usual treatment indicated above the following is a good prescription for *whooping-cough*:

R—Ext. cannabis indicæ, . . . . . gr. xv.  
Ext. belladonnæ, . . . . . gr. viij.  
Alcohol,  
Glycerin, . . . . . āā. ℥jss.

M.—Sig.—Four or five drops to a child one year old; two years old, five to eight drops three or four times a day.—Dr. Lockhart in *Atlanta Med. and Surg. Jour.*

### A CASE OF THE ATAXIC FORM OF ALCOHOLIC PERIPHERAL NEURITIS.

*Alcoholic Ataxia.*—*Ataxia gait; inability to stand with eyes shut; loss of knee jerks; girdle pain; recovery.*

T. G., 31, clerk, consulted me on the 2nd March, 1889, complaining of pains in the calves of his legs, which were worse on walking about. His illness began on February 18th.

*Previous History.*—He had never had any serious illness or met with a severe accident, though he had twice fallen from his bicycle and cut his face. Denied having had syphilis or any venereal disease. He had had gout, and used to keep a public house. According to his wife and his employer he had been in the habit of "boozing" himself with beer daily. Took no breakfast, but bread and cheese or ham and a pint of ale at 11 o'clock.

*Family History.*—His father had gout and died of it. His mother was living, aged 62, in indifferent health; 12 or 14 years ago she was insane. He had one brother and one sister alive and in good health.

*History of Present Attack.*—His wife and his employer concurred in stating that for about a fortnight they had noticed his memory had failed him. He forgot to do what he was told; and yesterday he imagined he had been at work the day before, although he had not been from home for several days. On Sunday, February 17th, he was in his usual bodily health and took a long walk with a friend. On Monday morning he started to walk to his office and found great difficulty in getting there. The distance was about a mile and the snow was on the ground; but he did not get his feet cold or wet. For the last two days he had had a sense of tightness round the waist (girdle pain). His wife said he had complained to her of seeing double.

*Present Condition.*—Patient came stumbling into my room, and very nearly fell; he could not stand steadily with his feet together, and fell as soon as he closed his eyes. The knee jerks were entirely gone. The pupil reflexes and ophthalmoscopic appearance were normal. There were no lightning pains; girdle pain already referred to had been present for two days.

His mental condition was not obviously abnormal, but his wife said that he asked her the same question repeatedly, and she was decidedly of opinion that his mind was affected. There does not seem to have been any moral change. There was no muscular wasting or obvious paralysis. No oedema or eruption on skin. Physical signs normal. Bowels regular.

Urine pale, clear, acid, 1010, contained a trace of albumen, no sugar.

He was ordered hypodermic injections of strychnine, and to become a total abstainer. Owing to difficulties, the strychnine was administered by the mouth and the abstinence maintained till lately, when he had been taking, against advice, a little claret.

*October 31st.*—Patient came to see me again. He could walk quite well; stood quite steadily with eyes shut and feet together; no girdle pain; knee jerks present. His urine still contained a haze of albumen. The pains in the legs were better.

*Remarks.*—These cases are sufficiently uncommon to make this typical example worth publishing.

The diagnosis was made on two grounds: 1, the very rapid onset, and, 2, the history of alcoholism. It is said that the absence of myosis, of the Argyll-Robertson pupil, of arthropathies, and of visceral crisis, are of diagnostic value, but all of these are absent in many cases of locomotor ataxia, which later develop into general paralysis.—Dr. Robert Saundry, in *Birmingham Med. Rev.*

### RESULTS IN THE TREATMENT OF SIMPLE FRACTURE OF THE SHAFT OF THE FEMUR AS DECIDED BY THE AMERICAN SURGICAL ASSOCIATION.

The frequency with which the surgeon is summoned to court as defendant in suit for damages for alleged maltreatment of a fracture of the femur makes this one of the most important questions in jurisprudence. Perhaps even more frequently the patient seeks to recover a large sum from either the individual or corporation by whom he was employed at the time of his accident. On such occasions in the past, the evidence of different surgeons testifying in the case has at times been so discordant that the court has come to look upon expert testimony with distrust, and juries have occasionally rejected it altogether.

In so simple a matter as fracture of the femur it would seem that there should not be so much diversity of opinion, and an effort has been made to harmonize the surgical mind upon this question, by the American Surgical Association, than whom no body of men can speak more authoritatively. A committee was accordingly appointed to report at the meeting now just past what, in their judgment, under the methods of treatment now employed, should be considered as satisfactory results. The committee consisted of Dr. Stephen Smith, of New York; Dr. D. Hays Agnew, of Philadelphia; Dr. David W. Cheever, of Boston; Dr. D. W. Yandell, of Louisville; Dr. Charles T. Parkes, of Chicago; Dr. P. S. Connor, of Cincinnati; Dr. Charles B. Nancrede, of Ann

Arbor; and Dr. Hunter Maguire, of Richmond. The following circular was issued to members: "What should be considered as a satisfactory result (other than perfect union) in the treatment of a simple fracture in the shaft of the femur?" Thirty-four replies were received; these were carefully tabulated, and the committee endeavored to select a common ground to which the Association could subscribe, and to which members could adhere in court.

The following are the conclusions. A satisfactory result has been obtained in the treatment of fracture of the shaft of the femur when (1) firm bony union exists; (2) the long axis of the lower fragment is either directly continuous with that of the upper fragment of the axes on nearly parallel lines, thus preventing angular deformity; (3) the anterior surface of the lower fragment maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the foot from its normal position; (4) the length of the limb is either exactly equal to that of its fellow, or the degree of shortening falls within the limits found to exist in 90 per cent. of healthy limbs, viz., from one eighth of an inch to one inch; (5) lameness, if present, is not due to more than one inch of shortening; (6) the conditions attending the treatment prevent other results than those attained.

This report was accepted by the Association. One year is fixed upon as a reasonable period after the cessation of treatment for a final decision in regard to restoration of function.

A limp or lameness, does not necessarily indicate an unsatisfactory result. It has been observed that many persons have a normal variation in the lengths of their limbs, in some of the cases as much as an inch, who show no signs of lameness. It is also found after fracture that by tilting the pelvis, some patients will compensate for considerable shortening, and show no limp in their gait, while others with much less shortening, will show decided lameness. Of course, reference is had only to simple fractures of the shaft of the bone; it would be obviously impossible to lay down any rule for the infinite variety of complications which may occur under other conditions.

The conclusions above given, however, cannot fail to be of the greatest benefit in future, as they are Medical Supreme Court decisions; it would seem that legally they must be accepted.—*Univ. Med. Mag.*

#### ANTAGONISM BETWEEN AGUE AND PHTHISIS.

I should like briefly to call attention to the possibility of there being an antagonism between malaria and phthisis. I was surprised in my

journey to Central Africa to notice the distribution of phthisis, for although bronchitis, pleurisy, and pneumonia were constantly seen in nearly all the districts through which I passed, the cases of phthisis which I was able to observe were few and far between, and corresponded in a marked manner with the absence of malaria, at any rate, in its most intense forms. From Khartoum, along the valley of the White Nile, as far as the Albert Lake, through the swampy districts of Unyoro and Uganda, I can recall having seen only very few cases of phthisis (in Uganda some eighteen or twenty). Subsequently, however, on my return journey, I saw a considerable number of cases in the Shuli district, at an altitude of from 3,000 to 4,000 feet, where malaria is very rare, and where, I may mention in passing, I think that Europeans could colonize. Again, in traveling through the Bahr-el-Ghazal district, I saw a considerable number of phthisical individuals, not inhabitants of that province, but men and women, soldiers or slaves, who had come from the elevated districts in the Mombuttu country. Further north, at Dara, I again met with phthisis in people who inhabited the highlands of the Gebel-Marah region, where, I was informed, malarial fevers were entirely absent.

During the last few years (it may, of course, be the result of accident) I have had the opportunity of seeing several patients distinctly phthisical, in the early stages of the disease, who have since been abroad, and suffered more or less from malaria. On seeing them after their return, I found, and must say to my surprise, that in seven out of nine, all the phthisical symptoms had disappeared, and in the other two, although I could find no improvement in their condition, the disease had apparently made no progress.

M. Boudin, in 1857, put forward the theory that malaria and phthisis were antagonistic. He held:

(a) That where malarial endemic fevers are prevalent, phthisis is rare, "that the frequency of one class of cases is inversely proportionate to that of the other."

(b) That where malaria decreases phthisis increases; and

(c) That phthisis is more curable in malarious regions than in others.

These propositions were at the time vigorously discussed, but the subject has fallen out of mind. Long before M. Boudin called attention to it, in 1841, Harrison, of Horncastle, remarked on the infrequency of consumption in the Fens, and, in 1811, Wells contended that consumption and malaria were opposed to each other, and referred to many authorities to corroborate his statements. The references to the literature on the subject will be found in the "British and Foreign Medical Chirurgical Review," vol. 23, 1859. The late Dr. T. B. Peacock, writing on the subject in 1858, did

not think that any such antagonism could be proved, and published six cases which he had himself treated in which phthisis and malaria both affected the patient. Still he writes thus: "I cannot, therefore, but conclude that it is not probable any material antagonism exists between phthisis and intermittent fever. The facts do not, however, warrant the denial of the supposition altogether, and there are probably few popular ideas which have not some foundation in truth."

It is only fair to mention that Dr. Peter Gowan, once physician to the King of Siam, does not credit the antagonism of ague and phthisis, owing to the prevalence of both diseases in Siam. ("Consumption," P. Gowan, M.D., London, 1878, pp. 57-59.) Still, he admits that "it (consumption) was unquestionably shown to be almost, if not quite, absent from many such localities, and to be less prevalent where the fever was of a bad and obstinate kind." In Corea, ague, which is there called "hakuchu," is universally prevalent, although the country is generally dry, and there are few marshes or swamps. Phthisis is almost unknown.

Prof. Virchow found that nearly the whole of the population of Upper Silesia suffered from malaria, and had enlarged spleens. He never saw a case of phthisis in that region, and the doctors resident there assured him that that was the result of their experience, too. Gowan says that in all cases of phthisis he saw in patients who had also an enlarged spleen, the right lung was affected, illustrating Dr. Brehmer's theory of the causation of phthisis, and he says: "In the enlarged spleen of those who have suffered from obstinate ague we have a sufficient explanation of their comparative immunity from phthisis by the accelerating influences it exercises on the circulation within the lungs, as a result of the intermittent compression to which the basis of the lungs are subjected by this in common with all other enlargements of the contents of the abdomen." There is doubtless much to be said for the enlargement of the spleen acting thus mechanically, but, to my mind, it is an insufficient explanation of the whole matter, for the spleen is not invariably sufficiently enlarged to act in that way. I thought that I should have found something to support my view that malaria and phthisis are antagonistic, in investigating the results which have been obtained in the rearing of monkeys in this country, but, although I find that it is true the majority of monkeys do die of phthisis, yet it must be admitted that those monkeys which died at the Zoological Gardens some years ago died from the effects of imperfect ventilation, and, therefore, it is impossible to class them among the deaths from phthisis proper.

In referring to the annual loss by phthisis in the army, it was in 1856 8.9 per 1,000 in the line regiments in the United Kingdom; in the Guards it was 12.5; but if we look at the mortality in

Malta for the same regiments during the same time, we find it was below 5 per 1,000, and that during the same time at Mauritius and Ceylon it was only 4 per 1,000, and in the Madras Presidency below 1, per 1,000.

Numbers of observers in America have called attention to the antagonism between ague and consumption. So, for instance, Dr. Green, of Whitehall, Washington, U. S. A., said as long ago as 1858 that, though intermittent fever was of unusual frequency in that district, there was not one case of phthisis developed there, and that phthisical patients who arrived there found "relief as decided as it was permanent." He mentions also a morass near Ruthland which was made into a pool, the result being that intermittent fever disappeared, and that phthisis took its place. This was the more remarkable because the re-establishment of the morass was followed by the reappearance of ague and a diminution of phthisis; indeed, it only took a half-year to establish this change.—*Felkin, Med. Press.*

THE TREATMENT OF HÆMOPTYSIS. — Professor H. Nothnagel, publishes in a Vienna medical journal an interesting paper on the treatment of hæmoptysis. The first thing, he says, is absolute rest. If the loss of blood is at all serious, the patient must not utter a sound; if it is necessary he should speak, he must only whisper, or better still, write down everything he wants to communicate. He must not be allowed to see visitors, and the sick-room must be kept at an even temperature. The patient must take nothing warm, nor anything likely to excite or irritate. The best food for the first two days is cold milk. Regular diet may then be resumed gradually, but all food which might increase the action of the heart must be avoided in future. Formerly an opinion prevailed that the patient should be allowed to cough, the retention of the blood being supposed to be hurtful, as it was believed that tuberculosis was a consequence of hæmoptysis, but this opinion is quite erroneous. On the contrary, one of the first indications is to suppress all inclination to cough as much as possible, for which purpose morphia is the best remedy. Should the hæmoptysis not cease, other remedies must be applied. The author first mentions those remedies which ought to be eschewed, and the use of which is occasionally a physiological error. The first to be banished is perchloride of iron, the action of which on the blood is to cause it to coagulate and to form a thrombus. In the form of inhalation it would be simply useless but for the great danger in allowing a patient suffering from hæmoptysis to draw a deeper breath than absolutely necessary for respiration. The liquor ferri, if administered internally, is, according to some, not absorbed at all, but,

even if it be so, it would only tend to increase the hæmoptysis. The same may be said of tannic acid and of alum, which contract the blood-vessels only when diluted to  $\frac{1}{2}$  per cent., and are consequently useless for hæmostatic purposes as well as for inhalation. The author dispenses altogether with inhalation in hæmoptysis. The only two hæmostatic remedies he recommends as useful are ergotine and acetate of lead; the first may be used internally and in hypodermic injections, the latter may be given in conjunction with opium. Another remedy which he mentions, but of which he has himself no experience, is *hydrastis Canadensis*. A few years ago hypodermic injections of atropine were recommended, and Prof. Nothnagel has occasionally seen them effective. No objection can be raised to half a teaspoonful of common salt when no other remedy is at hand. Hæmorrhage from the lungs is certainly sometimes arrested by its use, but the author is not quite sure if the success is *post hoc* or *propter hoc*. Nor is he certain whether, as supposed by some, a reflex irritation of the pulmonary vessels takes place. This theory is certainly physiologically feasible, as recent experiments have shown that sensory excitement in some parts causes the blood-vessels in other parts to contract. An application of ice, for instance, to the abdomen causes anæmia of the mucous membrane of the larynx. A very common remedy is the application of cold; but the ice-bag is, according to the author, of very doubtful value, as it is impossible to assume that the cold acts directly on the bleeding surface, for we do not know to what depth it penetrates. If the cold does act hæmostatically, the effect must be due to irritation of the skin. Professor Nothnagel warns us, however, that in some people the application of cold to the thorax causes cough, which is far more dangerous than the doubtful contraction of the blood-vessels can be useful. An extreme and heroic remedy is venesection. It is a well-known fact that wounded soldiers faint from loss of blood, when the hæmorrhage immediately stops, and a similar observation has been made in metrorrhagia and hæmoptysis.—*Lancet*.

**AN EASY METHOD OF PLUGGING FOR EPISTAXIS.**  
—Dr. A. A. Philip describes a ready method of plugging the posterior nares, which in his hands is both effectual and easily accomplished. A piece of old, soft, thin cotton, oiled silk, or silk, about six inches square—a piece of an old handkerchief will answer—is taken, and by means of a probe, metal thermometer case, or penholder, is pushed “umbrella” fashion into the nostril, the direction of pressure, when the patient is sitting erect, being backward and slightly downward. It is pushed on until it is felt that the point of the “umbrella” is well into the cavity of the nasopharynx. The thermometer case is now pushed

on in an upward direction and then toward the sides, so as to push more of the “umbrella” into the pharynx, and is then withdrawn. The closed end of the sac protrudes well into the pharynx, and its open end protrudes at the anterior nares. The inside of the sac may be brushed with some astringent, such as alum or turpentine. A considerable quantity of cotton wool is pushed well back to the bottom of the sac in the pharynx. Then, the thermometer case being held well against the packed wool, the mouth of the sac is pulled upon, and thus its bottom is drawn forward, and forms a firm hard plug wedged into the posterior nares. The sac may now be packed full of cotton wool, dry or soaked in some astringent solution. The mouth of the sac is tied just outside the nostril, trimmed with scissors, and the ends of the thread secured outside. In removing the plug, open the mouth of the sac, and, with small dressing forceps, gently remove the cotton-wool bit by bit. If there is bleeding, simply syringe the sac with weak carbolic lotion or Condy's fluid, and repack with clean cotton-wool. If there is no bleeding when the wool is picked out, gently pull out the sac, or if it be adhering to the mucous membrane of the nostril, apply a little warm water, and it may then be easily removed. By this method no damage is done to the floor of the nose or back of soft palate by strings, etc., no disagreeable hawking, coughing or vomiting takes place during the introduction, and no disagreeable strings are left hanging inside the mouth.—*Brit. Med. Jour.*—*Brooklyn Med. Jour.*

**ARSENIC IN PERNICIOUS ANÆMIA.**—J. A., a coachman, came to me on November 25th. He then stated that he had always been a pale man, but for the last three months had been feeling very weak, and became quickly fatigued on the smallest exertion. For the last two or three weeks he found that there was blood in the mouth on waking in the morning. The patient was tall, very thin, and intensely pale; the conjunctivæ were lemon colored, the hands pearly white, and the ears looked transparently waxy. The gums were pallid, large and very spongy, and at the junction of the teeth and gums a thin line of blood was visible. The tongue was clean and very pale, and the lips bloodless. There was no œdema of the ankles. Altogether he looked like a man who had recently suffered a severe hæmorrhage. He was short-breathed and felt faint when standing. The lungs were quite healthy. There was a soft systolic murmur over the cardiac area, probably anæmic in origin. A venous hum in the neck was most marked. The pulse was soft, of low tension, but not markedly accelerated. The urine contained one-sixth albumen, and was very pale in color. Three grains of the sulphate of iron was ordered thrice daily.



A fortnight afterwards I had the opportunity of making a careful examination of the blood. The corpuscles were found to be only eighteen per cent. of the normal number, while the hæmoglobin was twenty-three per cent. The corpuscles themselves were of various sizes, and formed rouleaux satisfactorily, but were soft and plastic. There was no leucocytosis. The blood appeared to make the naked eye obviously pale and watery. The urine at this time contained the merest trace of albumen, which entirely disappeared in a day or two. On examination of the eyes it was found he could not read ordinary print, and that there were large hæmorrhages into both retinae, especially on the right side. The iron was discontinued, and liquor arsenicalis was ordered in 5-minim doses thrice daily. He was ordered to remain at home, and was allowed the most generous diet.

Four days after the commencement of the arsenic he had a fit, but when I arrived he had partially recovered, and was fairly sensible, with no paresis. He volunteered the statement that he now saw a red color when looking at the light.

A week after the commencement of the arsenic (which was never increased beyond 5 minims thrice daily) there was no further bleeding from the gums. He had complained for a fortnight of a beating noise in the head, "like a steam-engine." This (in all probability the beating of own heart) ceased now to annoy him. The urine was normal but very pale. He was allowed to move about his room. His appetite was extraordinary, and, beside the most nutritious diet of strong soups, meat, etc., he took three to four pints of milk daily.

In three weeks he was able to walk half a mile without fatigue, and in a month returned to work. The corpuscles on January 16 (five weeks after the commencement of the arsenic) were seventy-six per cent. of the normal number, and the hæmoglobin sixty per cent. of the normal quantity. The hæmorrhage into the retinae had entirely disappeared, except for a slight blur on the right side. He could read small print and saw plainly. He continued the arsenic for another five weeks, and is now quite well.—*Therap. Gazette.*

**THE INFLUENCE OF DIET ON THE GROWTH OF HAIR.**—Several cases of shedding of hair after influenza have confirmed my opinion (E. D. Mapother, M. D.), that diet has much to do with the production and with the cure of symptomatic alopecia. Hair contains 5 per cent. of sulphur, and its ash 20 per cent. of silicon and 10 per cent. of iron and manganese. Solutions of beef, or rather, part of it, starchy mixtures, and even milk, which constitute the diet of patients with influenza and other fevers, cannot supply these elements, and atrophy at the root and falling of hair result. The colour and strength of hair in

young mammals is not attained so long as milk is their sole food. As to drugs, iron has prompt influence. The foods which most abundantly contain the above-named elements are the various albuminoids and the oat, the ash of that grain yielding 22 per cent. of silicon. With care these foods are admissible in the course of febrile diseases, when albumen is the constituent suffering most by the increased metabolism. I have often found a dietary largely composed of oatmeal and brown bread greatly promote the growth of hair, especially when the baldness was preceded by constipation and sluggish capillary circulation.

Those races of men who consume most meat are the most hirsute. Again, it is well known in the Zoological Gardens that carnivorous mammals, birds, and serpents keep their hair, feathers, or cuticle in bad condition unless fed with whole animals and the egesta contain the cuticular appendages of their prey in a digested or partly digested state. It is also an old well proven fact that a closely restricted diet, cheese for example, soon produces in dogs a loss of hair.

In treating fevers a long course of non-nitrogenous diet may promote seborrhœa, which is so often a concomitant of the alopecia. When the special nutritive supply is secure, the depressed condition of the vasomotor and trophic nerves proceeding from the cervical ganglia to the scalp may be stimulated by blisters and liniments at the back of the neck. I have always found that friction of the scalp with pomades and lotions dislodges many hairs which might otherwise remain, and that cold or tepid baths with salt added and rough rubbing of the rest of the body will flush the capillaries of the affected part more effectually. Besides, when pomades are used, frequent washing becomes necessary, and this is conducive to baldness.

**PATHOLOGY OF FACIAL PARALYSIS.**—Professor Minkowski, of Strassburg, has made an important contribution to this subject. Cases of Bell's paralysis are common enough, but it is not often that an opportunity occurs of examining the abnormal nerve. The clinical history of the case was the usual one. The attack came on after exposure to cold, and when the patient was last seen there was well-marked reaction of degeneration, but there were indications of commencing return of voluntary power. The patient died by misadventure, and the result of the examination of the nerve is somewhat surprising. There was no difficulty in removing the nerve, no appearance of inflammatory compression in the bony canal, and the nerve coverings were quite normal in appearance. In the peripheral branches of the nerve nearly all the fibres examined were in an advanced stage of degeneration. Here and there were newly formed nerve fibres and others in process of regeneration. In the other branches besides those degenerated



fibres were numerous well-formed normal fibres. Above the nerve to the stapedius the number of degenerated fibres gradually decreased, and at the geniculate ganglion the degeneration ceased entirely. In the superficial petrosal there were only isolated degenerated fibres, and this was the case in the nerve to the stapedius. No change was found in the fibres of this muscle. It will thus be seen that there was present no evidence of inflammatory action. The appearances seem rather to point to a change starting from the periphery, and the author suggests that this may be of the nature of a degenerative neuritis, the direct result of cold.—*Lancet*.

**HABITUAL ABORTION.**—Dr. Schuhl observes that when the cause of abortion is unknown, not only must the practitioner see that treatment suitable to all cases is carried out, but he must insist that the patient rests in bed at least during the days in each month of gestation which correspond to her normal menstrual epochs. Sometimes it is best to keep the patient in bed altogether till delivery. The causes of habitual abortion are very numerous, but two unquestionably predominate. Retroversion is the first; the second is syphilis, whether maternal or paternal. That disease sets up pathological changes incompatible with the development of the fetus. Paternal syphilis must always be suspected when abortion is very frequent in a woman whose pelvic viscera are absolutely healthy. Hence Dr. Schuhl finds that mercurial inunction applied to the husband is much the best treatment for habitual abortion of uncertain causation. Apart from the fact that patients and their husbands do not always admit that they have had syphilis when they have really suffered badly from that complaint, and are not always aware that they may have passed through a mild form, it is certain that a strict specific treatment has sometimes been followed by fertility, even where all evidence of syphilis has been absent both in patient and husband.—*Annales de Gynecologie*.

**DIAGNOSIS OF TUBERCULAR MENINGITIS IN CHILDREN.**—At a recent meeting of the American Pædiatric Association, Dr. W. P. Northrup read an interesting paper on this subject. He gave four symptoms which, when they existed together, were to him convincing evidence of the disease—persistent vomiting, irregular pulse, irregular breathing and apathy; there were also other significant symptoms connected with the organs of special sense. Professor Jacobi agreed with Dr. Northrup in the importance of the persistent vomiting as a diagnostic sign; the vomiting is apt to be marked when the meninges of the base of the brain are the seat of the tubercular deposit; if the tubercular deposit is not marked in this region

the vomiting is apt to be less pronounced or absent. Distinction must be made between the cerebral type of vomiting, which is projectile and not accompanied by nausea, and that which is merely reflex or of gastric origin. Dr. Northrup traced the infection in one of his reported cases to the use of tuberculous milk.—*Am. Jour. Med. Sciences*.

**ZINC CHLORIDE INJECTIONS.**—M. Lannelongue, exhibited at the Second Congress for the study of Tuberculosis, some thirty patients with tubercular arthritis, whom he had treated by means of injections of zinc chloride. In each case a plaster cast of the joint, as it was before the treatment was begun, was shown and compared with the actual condition. The oldest case had been under treatment only three months, and none had received over ten injections, yet all showed a marked diminution in the size of the joint, a finer tissue replaced the fungosities, and in some cases there was considerable painless and non-spasmodic joint motion possible. M. Lannelongue then demonstrated his method in a case of sacro-iliac disease accompanied with abscess and caries of the crest of the ilium. The solution employed was of the strength of one per cent., and two drops were injected at each point, the number of insertions varying according to the size of the joint, five or six being made in the case of knee-joint disease.

**CREMATION** seems to have acquired a sure foothold in the Argentine Republic. Since 1886 the total number of cremations carried out there has been six thousand seven hundred and eighty nine: in 1890 alone they amounted to two thousand and eighty-five. A law exists in Argentina to the effect that the bodies of all persons dying of infectious diseases and the fragments that remain of corpses that have been dissected must be burnt.—*Chicago Med. Record*.

It is rumored that a memorial is about to be presented to the United States Congress asking for the creation of a Government Department of Public Health, with a Cabinet officer at its head, to be known as the Medical Secretary of Public Health.

#### MODERN SPECIALISM.

“The body has been parcelled out,  
For doctors' benefit no doubt.  
Divided up so very nice  
That every one can get a slice.  
To one they gave the fingers, toes,  
Another gets the eyes and nose;  
A third, more greedy for his part,  
Has gobbled up the lungs and heart.  
For his untiring, ceaseless pen,  
They gave the pancreas to Senn.”

## THE CANADA LANCET.

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

*Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address, DR. J. L. DAVISON, 12 Charles St., Toronto.*

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TORONTO, DECEMBER, 1891.

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### THE BICHLORIDE OF GOLD.

The columns of the press, both lay and medical, are at present filled with allusions to the now famous treatment of inebriety by hypodermic injections of so-called bichloride of gold, as is practiced by a Dr. Keely at Dwight, Ill. There can be no doubt that whether the effect be of a moral nature or really due to the drug used, great and seemingly lasting benefit has been derived by the unfortunate victims of alcohol, who have sought relief from its clutches. We know of at least two cases where every other method having been tried in vain, the patients went to Dwight, undergoing the usual six weeks' treatment, returning cured as they say of any craving for stimulants; up to the time of writing no relapse has taken place, and a sufficient length of time has elapsed to prove that the injections are at least superior to any thing we have as yet met with.

But the question arises, What is the real nature of the remedy? It is claimed to be a preparation of the bichloride of gold and sodium, yet we cannot help thinking that perhaps cocaine is the active ingredient, or at all events one of them, the writer having found that hypodermic injections of  $\frac{1}{8}$  to  $\frac{1}{4}$  grs. four times daily relieves the craving for both alcohol and tobacco. Some need the dose increased up to grs.  $\frac{1}{4}$  or  $\frac{1}{2}$ , which latter may be given internally in distilled water. But care must be taken that too much be not given at first until the susceptibility of the patient has been tested, for fainting occasionally results from the

use of cotaine, even when locally applied in applications the nose or throat. This effect is however transient, and is relieved by placing the subject in a recumbent position. This drug is rapidly making a name for itself apart from its well known utility as a local anesthetic. The writer, who has had quite an extensive knowledge of its use in practice, can strongly urge its use in the following cases:—The vomiting of pregnancy he has frequently seen relieved as if by magic by gr.  $\frac{1}{8}$  to  $\frac{1}{4}$  in aq. dest. four times daily; as a cardiac tonic wherever indicated, in dose of gr.  $\frac{1}{10}$  to  $\frac{1}{4}$  three times a day; and to relieve the mental depression so generally met with in cases of gastric derangement, given in doses of  $\frac{1}{8}$  to  $\frac{1}{4}$  gr. one hour after meals, of course in conjunction with the usual remedies used, for cocaine is one of the most rapid stimulants known, causing clearness and brightness of the intellect within a few minutes of its ingestion. The only objection to its use is the fact that a cocaine habit is easily formed, and against this the practitioner must ever be on his guard.

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### PROGRESS IN PUBLIC-HEALTH WORK IN MICHIGAN.

In 1889, the Michigan State Board of Health resolved that the local boards of health throughout the State be urged to second the action of the State Board of Health by making "regulations" declaring typhoid fever a "disease dangerous to public health," which should be reported to the health officer in accordance with the law. Also that in the opinion of this Board all cases of so-called "typho-malarial fever" should be reported to the local health officer, and the same precautions taken as in cases of typhoid fever. Also that all cases of fever of doubtful origin continuing more than seven days should be reported to the health officer, and precautions taken as in other diseases dangerous to the public health, such as typhoid fever.

Since this action by the State Board of Health, it seems that a less proportion than formerly of the cases of fever are reported as "typho-malarial," and an increasing proportion of the cases of typhoid fever which occur, are, undoubtedly, being reported to the State Board of Health. The local boards of health are beginning to co-operate with the State Board; thus at its meeting, Oct. 16th, 1891, the

Board of Health of the City of Alpena adopted substantially the same resolutions as those adopted by the State Board; and restrictive measures for the prevention of typhoid fever are coming to be general throughout Michigan. There was need for it, because the vital statistics indicate that about a thousand lives a year were being lost in Michigan from this preventable disease.

The Secretary of the Michigan State Board of Health has succeeded in arranging with the United States authorities at Washington and New York, to have notice of names and destinations of all immigrants arriving at New York from infected vessels or places, who are bound for any part of Michigan. This enables the State Board to put local health officers on guard against the spreading of dangerous contagious diseases in Michigan by such immigrants.

#### ANNUAL BANQUET TRINITY MEDICAL COLLEGE.

The fifteenth annual banquet of Trinity Medical College was held at the Queen's Hotel, Toronto, on 19th November, and was one of, if not the most successful banquet ever held under the auspices of the college. The students turned out well, and the presence of an unusually large number of graduates of Trinity added materially to the success of the occasion. The Dean, Dr. Geikie, on behalf of Trinity Medical College, did full justice to the toast in an able speech, in which he referred to the very satisfactory and prosperous condition of the school, and he was applauded to the echo when he alluded to the extraordinary large freshman class of this year, it having been equalled in numbers only once in the history of the college. Dr. Mitchell, of Enniskillen, and Dr. Boeman, of Peterboro, made appropriate and very excellent speeches on behalf of the graduates, and in their allusions to the old tricks and jokes played upon the professors of their day fairly took the house. In addition to the members of the Faculty present we noticed Dr. A. J. Johnston, Dr. Allan, Dr. Milne, Dr. Millman, Dr. Story, Dr. Atcheson, Dr. Pepler, Dr. Barrick, Dr. O'Reilly, Dr. Harris, of Toronto; Dr. Stark, of Hamilton, Dr. Campbell, Newmarket, Dr. Boeman, Peterboro, Dr. Mitchell, Enniskillen, Dr. Wilson, Richmond Hill. The

original intention of these gatherings was to be a re-union of the graduates, and we are glad to notice the tendency in that direction. Altogether about two hundred and fifty dined.

#### OVER-PRODUCTION OF MEDICAL MEN.

To the Editor of the CANADA LANCET.

SIR,—It is beginning to appear to every thinking medical man that something of a radical nature must be done in the near future to prevent the terrible over-crowding of the profession in Ontario. From a financial standpoint the practice of medicine is living upon its reputation in the past, when it was really possible for the rank and file to amass a competence to tide them over old age and illness, and to this reputation is due the fact that from every village school-house and every other farm, students are flocking to the many Universities with which this Province is blessed (?), throwing away their chances of becoming comfortably independent as farmers or business men, degenerating as a rule, not without brilliant expectations certainly, into third-rate professional men, after four or five of the best years of their lives have been engaged in study.

Medical men are not producers, and whenever they exist in the community in greater numbers than the demand calls for are inimical to the progress and prosperity of the country; and good, energetic tradesmen, manufacturers, etc., are lost to the world, living a life of bitterness and semi-starvation in lonely offices, waiting for the patients whose visits are few and far between, and the bright dreams of youth dispelled by the bitter struggle for existence, which is perhaps keener in the ranks of medicine than any other profession, as the proportion of physicians to the population of Ontario is 1 to 500, a most lamentable condition of things certainly.

Young men who complain of this state of affairs are comforted by the sophistries of fond relations, who glibly tell them there is lots of room on the top. Yes; but while the struggle is so keen and educational advantages so equal as they are in this country, a dead level of mediocrity is about the highest point that can be reached in medicine, for young Napoleons of Physic are few and far between in any part of the world. How

many of our most eminent practitioners are known outside of Canada? aye, even outside of the city or town they practice in? They could be counted upon the fingers of one hand, and that is the cold, naked truth.

Another feature indicative of the keen competition existing in Ontario, is the prostitution of medicine by the various societies, who for a meagre pittance, scarcely better than a colored waiter would receive for a tip, secure the services of a doctor, who must, as a rule, supply the drugs as well.

The fault is not the practitioner's, he must live and support a family; having been lured into medicine by the false hopes and ideals formed of a life of gentlemanly ease and affluence; and many a man, who would otherwise scorn to do "lodge work," is driven to it by stern necessity which knows no law. The fault lies in our erroneous system of over-education which prevails in Canada. Education is, in many cases, a curse instead of a blessing. Owing to it, the farms are being deserted. The young men are flocking to the cities to be hangers-on in real estate, businesses, or professions leaving strangers and aliens to till their fathers' soil. Education, theoretically, is a most excellent thing, and up to a certain point this is the truth; but it remains a fact that the pursuit of happiness and pleasure is the leading passion animating the human breast, and will ever remain so. Therefore, the system of compulsory education of this Province, planting the germ of diseased ambition in hundreds of brains, causing them to regard labor as degrading and unworthy of them, embittering their whole existence in the futile struggle for wealth, is wrong, and is doing Canada more harm than any other one thing.

People don't like to be told this, but it is nevertheless a fact. The Government of the country should close up some of the superfluous medical schools of this Province. One would be more than sufficient to cater to the needs of the community. But we might as well tell the waves of the sea to recede as to expect any thing of the kind to be done. It is clearly the duty of every conscientious practitioner to warn the young men of the country to avoid the profession of medicine; for Canada is a young country with sparse population, and stands in need of strong arms and willing hearts to build

her up and develop her mines, manufacturing industries and agricultural interests, in order that, at a future date, we may take a place as one of the wealthiest nations of the earth.

MEDICUS.

Toronto, Nov., 1891.

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DRAINAGE OF WOUNDS, ESPECIALLY AFTER URETHROTOMY.—Dr. Kinloch gives the following conclusions regarding the drainage necessary after urethrotomy (*Annals of Surgery*):

1. Urethrotomies for strictures of the penile portion of the urethra, including the meatus, require no artificial drainage. In case the urine is healthy, the natural passage of this is sufficient to prevent lodgment of blood or inflammatory exudates and subsequent decomposition, putrescency, and sepsis.
2. To insure against the action of unhealthy urine, the secretion must be modified before resorting to operation by the use of proper medicinal agents known to be efficient for this end. The bladder must also be treated as a preliminary, when its condition is such as to furnish diseased elements which give deleterious character to the urine.
3. If deemed necessary further to guard against the noxious character of the urinary secretions, the catheter *à demeure* must be resorted to for draining the bladder for forty-eight to seventy-two hours. The rigid English gum catheter is to be preferred to the soft rubber one, as less likely to be displaced.
4. After internal urethrotomies of the deep portion of the urethra, drainage is most essential. This cannot be properly secured by the mere use of the catheter, and, therefore, it is best to abandon such operation and to substitute for it a perineal section or external urethrotomy.
5. After this latter operation, drainage goes on securely, because of the direct external opening. It should, however, be more thoroughly insured by a *perforated* drainage-tube, reaching from the meatus, and made to project through the perineal wound; this is to be kept in place from three to five days.
6. Bladder drainage after perineal urethrotomy is not essential if the urine be healthy. By the voluntary efforts of the patient the urine flows readily from the bladder, and escapes through the perineal wound.

7. To better insure the escape of urine, however, through the perineal wound, and also prevent its contact with all lesions of the canal, a short tube, of large calibre and rigid walls, may be passed into the bladder from the perineal wound, and kept in position by a suture passed through the tegumentary edge of the wound. This tube may be removed after three days.

8. The use of non-irritating, antiseptic injections through the tube occupying the canal, furnishes an additional precaution against sepsis. The bladder may also be easily washed out by means of the tube used for draining it through the perineum.

**MISTAKES OF PHYSICIANS.**—The following (*Pacific Rec.*), seem to us as good a *résumé* of the errors of some of the cloth in certain directions as could well be formulated :

First—To promise a patient that you will cure him.

Second—To promise to call at an exact specified time.

Third—To promise that the malady will not return.

Fourth—To promise that you can render more efficient service than your fellow practitioner.

Fifth—To promise that your pills are not bitter or the knife will not hurt.

Sixth—To promise that the chill or fever will not rage so high to-morrow.

Seventh—To allow your patient to dictate methods of treatment or remedies.

Eighth—To allow yourself to be agitated by the criticism or praises of the patient's friends.

Ninth—To allow yourself to buoy up the patient when the case is hopeless.

Tenth—To allow yourself to make a display of your instruments.

Eleventh—To allow yourself to experiment or exhibit your skill uncalled for.

Twelfth—To allow yourself by look or action in a consultation to show that you are displeased and that if you had been called first matters would have been different.

Thirteenth—To allow yourself to indulge in intoxicating beverages.

Fourteenth—To allow yourself to rely wholly upon the subjective symptoms for your diagnosis.

Fifteenth—To allow yourself to tell the patient

you are prescribing saccharum album when you are giving calomel.

Sixteenth—To allow yourself to give arsenic and quinine when a bread and water placebo will answer.

Seventeenth—To allow yourself to tell Mr. Smith the weak places and irregularities of habits in Mr. Jones' family.

Eighteenth—To allow yourself to give your services or an opinion without a reasonable fee or a reasonable expectancy.

**BORAX IN EPILEPSY.**—The treatment of epilepsy being in so inchoate a state, or, rather, we are treating the disease so empirically, that even though no *rationale* may be given, anything which promises relief to the sufferer is welcome. The following is from the *Lancet*: "Dr. Dijoud has tried this remedy—borax—in twenty-five cases, and he claims to have entirely cured one, and to have relieved all except six. The duration of the treatment varied from one to seven months, and he was able without inconvenience to carry the dose up to ninety grains a day. This was only possible if a beginning were made with small doses, which were gradually increased; and when the dose exceeded sixty grains daily he found it advisable to add some glycerine to the water and syrup in which the drug was usually administered. It should also be mentioned that the patients to whom Dr. Dijoud administered borax had been treated unsuccessfully with the bromides, and there seems now to be little doubt that in certain cases of epilepsy, borax is of very considerable use. It is desirable that particulars should be furnished of the time that elapsed between the cessation of the treatment by bromides and the inauguration of that by borax, as it is well known that epileptics who have been treated with bromides often improve much in their condition after the drug has been left off; and it is necessary to distinguish this improvement, which at least occasionally occurs, from that which may be due to the administration of a fresh remedy.

**NEW YORK PASTEUR INSTITUTE.**—Dr. Paul Gibier, Director of the New York Pasteur Institute, informs us of the results of the preventive inoculations against hydrophobia performed at this Institute during the first six months of the

second year of its existence—February 18, 1891, to August 18, 1891. During this time 415 persons, having been bitten by dogs, cats, and other animals, applied for treatment. These patients may be divided in two categories:

1st. In the case of 345 of these persons it was demonstrated that the animals attacking them were not mad, consequently the patients were sent back, after having had their wounds attended to during the proper length of time.

2nd. In 70 cases the anti-hydrophobic treatment was applied, hydrophobia of the animals inflicting bites having been evidenced clinically, or by inoculation at the laboratory, and in many cases by the death of some other persons or animals bitten by the same dogs. Indigents have been treated free of charge.

The persons treated were: 17 from New York, 16 from New Jersey, 11 from Massachusetts, 5 from South Carolina, 5 from Texas, 3 from Connecticut, 2 from Maryland, 2 from Missouri, 1 from Ohio, 1 from North Carolina, 1 from Michigan, 1 from Pennsylvania, 1 from Rhode Island, 1 from Arkansas, 1 from Virginia, 1 from Mexico, 1 from West Indies (Curaçoa).

Deaths by hydrophobia after treatment.—Miram Adams, 5 years old, of South Farmingham, Mass., badly bitten July 14th last in nineteen places by a dog recognized to be mad. Treated July 15th to August 1st. Symptoms of hydrophobia appeared six days later (Aug. 6th). Died Aug. 9th.

Three other persons—two, sisters of the patient—and a man, bitten by the same dog, who received the same course of treatment, are now enjoying good health.

This, so far, is the only death by hydrophobia out of the 255 cases treated at this Institute to date.

BELL'S PARALYSIS.—We have been so cock-sure regarding the pathology of facial paralysis and the theory fits the foramen so nicely that the following (*Lancet*) is rather a cooler: Professor Minkowski, of Strassburg, has made an important contribution to this subject. Cases of Bell's paralysis are common enough, but it is not often that an opportunity occurs of examining the abnormal nerve. The clinical history of the case was the usual one. The attack came on after exposure to

cold, and when the patient was last seen there was well-marked reaction of degeneration, but there were indications of commencing return of voluntary power. The patient died by misadventure, and the result of the examination of the nerve is somewhat surprising. There was no difficulty in removing the nerve, no appearance of inflammatory compression in the bony canal, and the nerve coverings were quite normal in appearance. In the peripheral branches of the nerve nearly all the fibres examined were in an advanced stage of degeneration. Here and there were newly formed nerve fibres and others in process of regeneration. In the other branches besides those degenerated fibres were numerous well-formed normal fibres. Above the nerve to the stapedius the number of degenerated fibres gradually decreased, and at the geniculate ganglion the degeneration ceased entirely. In the superficial petrosal there were only isolated degenerated fibres, and this was the case in the nerve to the stapedius. No change was found in the fibres of this muscle. It will thus be seen that there was present no evidence of inflammatory action. The appearances seem rather to point to a change starting from the periphery, and the author suggests that this may be of the nature of a degenerating neuritis, the direct result of cold.

TREATMENT OF SPRAINS.—Dr. N. W. Cady in a recent number of the *Medical Record* writes:—A recent number of the *Record* promises fame to the man who gives an unfailing remedy for sprains. Here it is in two words: A half hour's douching with water at a temperature of 120 degrees F., and the fixation of the joint by a splint on the flexor side of the joint, or upon the extensor side, if that be more convenient. For example, in a case of ankle sprain, after a half hour's steady douching with hot water at 120 degrees F., I prepare an anterior splint of ten to sixteen layers of mosquito bar, which is thoroughly filled by immersion in wet plaster of Paris. This is trimmed by spreading it on a board and cutting to shape with a knife. The length may be thirteen to sixteen inches, breadth four to six inches. Where the splint passes over the instep the edges on each side are folded over to make the splint narrower and thicker. A layer of cotton is then spread over the face of the splint and the splint is applied from

base of the toes to about halfway up the leg and carefully secured and moulded by a narrow roller bandage. While the plaster hardens, hold the foot in whatever way is easiest to the patient. There is rarely any further complaint of pain if the splint fits neatly. This, with perfect rest, constitutes the whole treatment, which should continue at least a week, or until all extravasation is absorbed. Fourteen years' experience and observation of results obtained by other methods satisfies me that it is the best and most rational treatment.

The above is in keeping with what was advocated by us some years ago, but we are of opinion that many a sprain is yet treated by liniments and rubbing, and massage even, a most unscientific procedure.

**CAUSES OF SUDDEN DEATHS.**—Says *La Mtd. Moderne*:—We are always astonished to notice how frequently physicians called upon to sign a death certificate in cases of sudden decease give as a cause, *rupture of an aneurism*.

Cerebral apoplexy rarely causes sudden death, and aneurisms only in the proportion of 5 per hundred, as proved by the statistics of Wynn Westcott, of London.

Of one thousand inquests noted by him, if we eliminate deaths caused by accidents, murders and suicides, and those of children under twelve years of age, there remains three hundred and three cases of sudden death. One hundred and eighty-five among the male sex and one hundred and eighteen among females. In one-third of the cases sudden death should be attributed to alcoholic excesses.

Westcott divides the causes into three classes:

1. The *syncofes*, 210 cases—15 ruptures of aortic aneurisms, 4 ruptures of the heart, 20 cases of valvular lesions of the heart, 3 cases of cardiac dilatation, 77 fatty degeneration of the heart, 10 hæmoptysis, 3 hæmatemeses, 2 metrorrhagia, 2 emboli, 3 perforations of the stomach or of the intestine, 2 cases of angina pectoris, 3 of *delirium tremens*, etc.
2. *Coma* 64—of which 20 were due to alcohol.
3. *Asphyxia* 29—œdema of the glottis, croup, convulsions, etc.

**DURATION OF LIFE.**—From *The Insurance Agent*, (*Southern Sanitarian*) we learn that a well-known German statistician has obtained the following

statistics in regard to duration of life; The average is thirty-seven years. Before the seventeenth year a fourth of the population dies. But one person in a thousand attains the age of one hundred years; six in a thousand reach the age of sixty-five years; 35,214,000 persons die during each year; 96,480 each day; 4020 each hour; 67 every minute; while there are born 36,792,000 annually, 100,800 daily, 4200 hourly, and 70 in each minute. The average duration of life is greater in the married than the unmarried individuals, among civilized than among uncivilized communities; while tall people are longer-lived than those of shorter stature. The chances for life, as regards men and women, are more favorable for the latter before the age of fifty, for the former after that age. Married persons bear the proportion to single ones as seventy-five to a thousand. Those born in the spring are more robust than those born at other seasons of the year. More deaths and births occur during the night than during the day.

**THE THERAPEUTICS OF MUSIC.**—An article has been going the rounds of the medical press, on the therapeutic value of music. It is sincerely proposed to employ this "therapeutic agent" scientifically in the treatment of disease. We have not copied it, as we can see nothing practical in it. Indeed nothing can be more chimerical. The blue glass craze was sense as compared to it, notwithstanding Shakespeare's dictum that "some men, when a bag-pipe sings i' the nose, cannot contain their urine." The following airs have been suggested by the *Med. Press*, as suitable for the cases enumerated, viz:—Retarded labor from inertia, "Comin' Thro' the Rye;" Cases of chronic deafness, "Come Back to Erin;" Epilepsy, "Let Me Like a Soldier Fall;" Pyrexia, "The Coolin;" Melancholia, "The Heart Bowed Down;" Cases of doubtful diagnosis, "Oh, Dear! What Can the Matter Be?"

**IODOFORM INJECTIONS IN GOITRE.**—Dr. Kapper, an Austrian military surgeon, has employed, says *The Lancet*, in fifteen cases, with invariable success, Mosetig's plan of injecting iodoform emulsion into soft thyroid tumors. In every instance there was a diminution in the circumference of the neck amounting to from 8 to 10 cm. Antiseptic pre-

cautions were employed, and in some cases where the tumor was of considerable dimensions several syringefuls were injected into different parts of the parenchyma. In order to ascertain whether the needle has entered the gland the patient is asked to swallow, when, if it has so entered, the downward movement of the syringe shows that the needle has been carried upward. In some cases the injections were repeated daily for several days, in others at intervals of a few days. In no cases were any untoward symptoms produced.

**FOR INGROWING TOE-NAIL.**—Dr. Puerckhauer recommends (*Memphis Med. Monthly*) a novel and simple, and, at the same time, competent treatment for ingrown toe-nail: A forty per cent. solution of potassium is applied warm to the portion of the nail to be removed. After a few seconds the uppermost layer of the nail will be so soft that it can be scraped off with a piece of sharp-edged glass; the next layer is then moistened with the same solution and scraped off; this must be repeated until the remaining portion is as a thin piece of paper, when it is seized with a pincette and lifted from the underlying soft parts and severed from the other half. The operation does not require more than half an hour's time, is painless and bloodless, while the patient is delivered from his suffering without being disabled even for an hour.

**CIRCUMSCRIBED PATCHES OF PSORIASIS.**—The following is recommended for small patches on the scalp:

R—Acidi pyrogallici,  
 Ichthyol,  
 Acidi salicylici, . . . . . āā 4 to 5.  
 Vaselini, . . . . . 35.—M.

Or, for isolated patches:

R—Saponis viridi,  
 Vaselini, . . . . . āā 20.  
 Ichthyol,  
 Acidi salicylici, . . . . . 2.  
 Acidi pyrogallici, . . . . . āā 1.—M.

Daily frictions should be made and continued, unless the scalp becomes irritated.

**BELLADONNA IN LABOR.**—Dr. Aasher, of Lithgow, New South Wales, advises (*Australasian Med. Gazette*) the use of belladonna in the early

stages of labor, having found it of immeasurable benefit, saving considerable pain to the patient and materially diminishing the expected period of the labor. In primiparæ, after a prolonged period of pains of more or less intensity, and with but little dilatation of the os, as well as in the more intense condition of a completely rigid os, where, with extreme contractions, no dilatation whatever occurs, he has given large doses of belladonna with marked effect. He usually prescribes a reliable tincture of belladonna in doses of twenty to thirty minims every hour, or oftener; and satisfactory dilatation usually follows the first or second draught.

**MENSTRUATION IN THE MALE.**—Paul Albrecht (*L'Anomale*) draws attention to the fact that white blood corpuscles appear in the urine of men at regular intervals, are present three or four days, and then disappear. This he interprets as a kind of menstruation. The idea is not a very strange one, for it is a known fact that men with excessive hypospadias menstruate. He offers this as another proof of the independence of menstruation and ovulation. It is to be hoped that further investigation will afford a clearer exposition of the subject.

**DR. ROTHE** (*Brit. and Colon. Druggist, Coll. and Clin. Rec.*) uses for erysipelas the following:—

R Creolin . . . . . 1½ parts.  
 Cretæ præp. . . . .  
 Adipis, . . . . . āā 15 "  
 Ol. menth. pip. . . . . gtt v.

This is spread in thickness of the blade of a knife over the diseased parts two or three times a day, a thin layer of cotton-wool being applied as a covering. In from twelve to twenty-four hours improvement was always apparent, and the disease was cured in three or four days. The same ointment did good service in weeping eczema of the face, as also in several cases of eczema in children. A patient suffering from scabies was treated with thorough washing with soft soap and inunction of this ointment with such a decided effect that he considers creolin to be a specific for the disease.

A CORRESPONDENT of the *Washington Star*, who has been studying the subject of getting rid of fleas, gives this as the result of his investigations: If those who are troubled with this insect will



place the common adhesive fly-paper on the floors of the rooms infested, with a small piece of fresh meat in the center of each sheet, they will find that the fleas will jump toward the meat and adhere to the paper. I completely rid a badly infested house in two nights by this means.

**REMOVAL OF MOTHER-MARKS.**—The *Allgemeine Medicinal Central Zeitung* gives the following as very efficacious: Mix one part of tartrate of antimony with four parts of emplastrum saponatum and work into a paste. Apply the mixture over the mark to be removed to the depth of one line (one-twelfth inch), and cover with a strip of gummed paper or court plaster. On the fourth or fifth day suppuration sets in, and in a few days later scarcely a sign of the mark can be seen.—*Amer. Med. Jour.*

**SULPHONAL IN THE NIGHT SWEATS OF PHTHISIS.**—Dr. Erede says (*Br. Med. Jour.*) that sulphonal, given in the early hours of the evening, in doses of from 8 to 16 grains, almost invariably succeeds in suppressing or invariably diminishing the night sweats of phthisis. He is inclined to think that the effect of sulphonal in checking diaphoresis is to be explained by its action on the nervous system.

**RINGWORM.**—In obstinate cases of ringworm the following is a very successful formula:

R—Hydrargi bichloridii, . . . gr. ij.  
Tr. benzoin comp., . . . ʒj.—M.

Paint over affected part. This should be used once a day for two or three consecutive days. It should not be applied if there is excoriation, as it is irritating.

**PYRIDIN IN GONORRHOEA.**—*Therap. Monats*, says that three or five injections of the following are sufficient to give relief:

R—Pyridini, . . . gr. v.  
Aq., . . . ʒij.—M.

Sig.—One injection daily.

**FOR HEADACHE.**—In many cases rebellious to all other medication, Pescarolo has obtained (*Nov. Rém.*) good results with the following mixture:

R—Antipyrene, . . . 4 parts.  
Phenacetine, . . . 2 "  
Antifebrine, . . . 1 "

He supposes that the favorable action is due to a new body which is formed in the mixture.

**SALICYLATE OF SODA AS A CHOLAGOGUE.**—Prof. German Sée, in an article on hepatic colic, published in the *London Lancet*, lays special stress upon the use of salicylate of soda for the expulsion of gall-stones. Unlike the well-known cholagogues it stimulates biliary secretion without increasing the solid elements of the bile, but increasing the fluid element it thus aids in the expulsion of the gall-stones.

**MIGRAINE.**—The following powder is recommended, in *La Medicine Moderne*, for the treatment of migraine:

R—Citrate of caffeine, . . . gr. jss.  
Phenacetin, . . . gr. ij.  
Sugar of milk, . . . gr. iv.—M.

Sig.—Take at once, to be repeated if necessary in the course of two hours.

**CORROSIVE SUBLIMATE AS AN ANTISEPTIC.**—Dr. Ahl has shown by a great number of bacteriological and chemical researches, that the application of heat increases the antiseptic power of corrosive sublimate solutions. A cold solution of 1 to 1000 has less antiseptic action than a solution of 1 to 10,000 heated to 40° C., and the latter does not cauterize and thus prevent rapid union of wounds.

### Books and Pamphlets.

**PTOMAINES, LEUCOMAINES AND BACTERIAL PROTEIDS, OR THE CHEMICAL FACTORS IN THE CAUSATION OF DISEASE.** By Victor C. Vaughan, Ph.D., M.D., Professor of Hygiene and Physiological Chemistry, University of Mich; and Frederick G. Nevy, Sc.D., M.D. Second edition revised and enlarged. Philadelphia: Lea Brothers & Co., 1891. Toronto: Carveth & Co.

This second edition will be read with much interest. The fact that germs are pathogenic is now an accepted one, and the study of the poisonous products which they elaborate in their life-process in the blood or tissues must be regarded as of the supremest importance in the study of the diseases which they cause. Immunity, an article on which appears in the columns of this issue, demands a careful study by every scientific and practical man, and now that such immunity is being sought by the aid of bacterial products, this line of thought must be of the greatest interest to all scientific students of medicine. The work comprehends, we believe, all that is known on the subject up to the present date.