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**DIET OF CHILDREN FROM TIME OF
WEANING TILL END OF SECOND OR
THIRD YEAR.***

BY H. T. MACHELL, M.D.,

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St. John's Hospital for Women.

Mr. President and Members: The proper food for babies just after weaning, and young children up to two or three years of age, is not a subject about which the general practitioner ever gives much thought. Indeed, he is not often consulted in regard to the subject. More frequently the grandmother or some elderly nurse suggests that the child should be fed on this and that or the other thing, and it is given. Probably more frequently still the child gets a little of everything at the table, neither father nor mother thinking that little children should not have the same diet as themselves. Frequently the parent's food is coarse and badly cooked, and when that is the case the baby must necessarily suffer accordingly. When one considers that the greater proportion of ailments among young children is due to digestive disturbances, and by far the largest number of these cases to improper feeding, I feel that I need no apology for bringing before this society a subject which may, at first thought, appear to be insignificant.

The time of weaning cannot be the same for

all infants. The majority of authorities agree that it should take place between twelve and eighteen months. It should never occur before one year except for some grave reason, and not then if that time happens to come during the latter part of the spring or at any time during the summer. We know that digestion is carried on with much more difficulty during the hot weather—that the system is then less able to resist the entrance of certain micro-organisms into the alimentary canal and their multiplication there. An effort should always be made to have the weaning take place a sufficiently long time before the hot weather, to enable the baby to get accustomed to the new food, whatever it may be. To allow a baby to be weaned deliberately during the summer months is almost criminal; it means that the baby has to run the gamut of all the intestinal diseases, and that, if it does survive, it will have received such a shock that it will take months, or possibly years to recover properly. The second summer is always a serious one for children. The laity have come to recognize this. The mother, if she be a wise one, will have accustomed her baby to take food out of a spoon or cup or bottle before weaning entirely; or she may have fed the baby during the day, reserving the breast-milk for the night time. By doing this the baby will have got accustomed to taking its food out of a spoon or cup, and thus one of the earliest lessons in feeding will have been learned.

Having weaned her baby at about a year old, what is the mother to feed him on? If, for any

* A paper read before Toronto Medical Society, May 20, 1892.

serious reason, the weaning has occurred during the summer months, the baby should be confined to a milk diet (by milk I mean cow's milk as ordinarily obtained in cities). If he thrive, it is advisable to continue with it alone till the eighteenth month at least. Many children will take nothing else than milk up to two or three years, and, provided enough be taken, no fear of their nutrition need be entertained. If a child thrive on milk, he is never to be forced to take additional food merely because a certain age has been reached; let the healthy appetite be the guide.

You have all seen "one cow's milk" advertised, and must have noticed it painted in large letters on the sides of the milk wagons going about the city. Do not allow your patients to be deluded with the idea that they are getting "one cow's milk"—even if they are paying an additional price for it. They are not likely to do so if the dealer has more than one cow. Some years ago I recollect a patient on Augusta Avenue telling me, at one of my visits, that they had found a milkman who was good enough to let them have "one cow's milk," at an extra price of course, and to it they attributed the improvement in the child's condition. Almost immediately after leaving the house I noticed on the sidewalk, three or four doors up from this house, a milkman emptying milk from his large can into two or three small ones, one of which he handed in at the door of the house I had just left. This was their "one cow's milk," and probably a fair sample of the article usually sold as such. The mixed milk of a good herd is to be preferred, in any way, to that of a single animal. It is less likely to be affected by peculiarities of feeding, and less liable to variations from alterations in health or different stages of lactation.

Pregnancy seems to be given as the chief reason why most women wean their baby during the hot weather, if questioned on the subject. Seldom or never have I seen any serious result to a nursing baby from the mother becoming pregnant; and at any time during the summer months I should always strongly urge a mother to continue nursing her babe till the middle of September, that is, till the cool weather comes on. In giving expression to this opinion, I know I am running contrary to the teaching

and the practice of many. Laziness or unwillingness of some mothers to nurse their babies, and the desire to turn them over to the sole care of a nurse, is, many a time, the cause of babies being weaned long before they should be. If a child does not thrive on milk alone, some of the farinaceous articles of diet may be added, with the understanding that milk should form the basis of the diet. Barley water is certainly the most frequently used, and probably the best one, though, if there be a tendency to constipation, oatmeal water or thin gruel at one or two meals a day will be preferable. Either of these substances should be boiled at least four or five hours (Eustace Smith), to insure thorough cracking of the starch granules, and then strained. They may be added to milk in the proportion of one to three or four, or even one to two.

J. Lewis Smith, at the meeting of the American Pediatric Society, 1889, advised for this purpose barley flour, which, in a double boiler, has been subject to the heat of boiling water for seven days. This flour is so largely used that it has been placed in some of the drug stores in New York for sale. The flour ball recommended by Eustace Smith over twenty years ago in his work on "Wasting Diseases of Children" was a step in this same direction. Arrowroot, from the large amount of starch, should not be used. Stale bread has been suggested also; and I have observed on many occasions the avidity with which children will take this. One method of preparing it is by taking a slice or two of the centre of the loaf, pouring boiling water on it, allowing it to stand soaking for half an hour, pouring off the water, adding fresh boiling water, and then boiling briskly for another half hour. If the water be now strained off it forms a stiff jelly. A portion of this may be added to milk or milk and cream. Some children will take this without any sugar if salt be added. Beef tea or beef broth, chicken broth, mutton broth, etc., I scarcely ever advise, though they are recommended by almost all the authorities as foods. It should be recollected in advising these foods that mutton causes constipation, and that veal and beef are frequently the cause of diarrhoea (Adams). According to Eustace Smith, the farinaceous particles retard the curdling of milk by getting between the particles of the coagulum. *The casein is thus separated,

not in several large clots, but in minute portions, which are more easily attacked by the digestive fluids. In other words, they act as a mechanical diluent.

Rotch, in the *Boston Med. and Surg. Jour.*, 1889, took up this very subject, and from a series of experiments came to the conclusion that the views concerning the various diluents used for this purpose are not only theoretical, but incorrect. He started out with the fact that the total amount of nitrogenous matter in human milk is from 1 to 2 per cent., and in cow's milk about 4 per cent. A portion of this is coagulable, and a part of this coagulable portion consists of a chemical combination called casein. The non-coagulable portion in human milk is greater than in cow's milk. The reverse of this is true of the nitrogenous portions of cow's milk. This difference in coagulable quality has induced observers to attempt to break up the larger curd of cow's milk with diluents and attenuants; but he believes that since these nitrogenous matters are two to four times as great in cow's milk as in human milk, it is more practical to dilute these matters until the dilution corresponds to that found in human milk, when the coagulum will be found to correspond to that of human milk and will not need to be broken up. It is claimed that the curd of human milk is small, soft, and friable, and that of cow's milk is large, tough, and tenacious; but Rotch found that where the percentage of albuminoids in human milk reaches that in cow's milk, the curd resembles that of cow's milk. In support of this, he instances the case of a wet nurse whose milk on plain food contained 2.59 per cent. of albuminoids. After a three weeks diet of greater amount and richer quality, with less exercise, the percentage reached 4.61 per cent., and the babe vomited thick curds. On a return to plainer food and skimmed milk, the percentage fell to 2.9 per cent. and the babe ceased vomiting. He gave in detail ten experiments with cow's milk, twenty-four hours old, each treated differently by boiling, sterilizing, lime water, barley water, etc., and then digesting artificially; in nine, curds were found in different sizes, the size decreasing as the proportion of diluents was increased, until in the tenth, in which the proportion was one part milk and five parts plain water, no curd was found—in this

respect resembling woman's milk tested at the same time. These results show that a diluent is of service, not so much for any particular chemical quality or ingredient it may contain, as for its power of diluting the milk.

In the "Cyclopaedia of Diseases of Children," this same experimenter gives a formula for making a preparation which has the same chemical constituents as human milk. It is as follows:

Milk	̄ii.
Cream	̄iii.
Water	̄x.
Milk Sugar	2 measures.

Place in a flask in a steamer and steam for twenty minutes; then remove the flask from the steamer, and, when slightly cool, add

Limewater ̄i.

Place on ice and give proper amount at proper times. The measures mentioned above are of tin, and hold ̄iii.²/₃

Rotch claims that this is an improvement on the Meigs' mixture which many have used for several years. Meigs' mixture is:

Milk	̄ii.
Cream	̄iv.
Limewater	̄iv.
Sugar water	̄vi.

The sugar water is of the strength of ̄17³/₄ to a pint of water. The limewater here is ¹/₄ of the whole amount, and distinctly alkaline to the taste; while in Rotch's preparation it is ¹/₁₆, and not at all suggestive of alkalinity.

I have prescribed the former preparation very frequently during the last two years for children under, as well as those over a year, suffering from malnutrition, and found it to be nearly always well digested.

Arthur V. Meigs, at the meeting of the American Pediatric Society held in Washington in 1889, suggested an improvement in the preparation of the mixture named after his father. He thought that the cream, as ordinarily obtained in cities, is kept so long that it is very liable to become sour; and therefore directs now that the mixture be prepared as follows: One quart of ordinary milk is placed in a high pitcher and allowed to stand in a cool place for three hours; then one pint is slowly poured off, care being taken that the pitcher is not agitated, the object being to obtain the upper layer of

fluid, rich in fat, and leave the lower, comparatively poorer, portion behind. When a child is to be fed there are taken of this :

Weak cream	3	tablespoonfuls.
Lime water	2	"
Sugar water	3	"

Sterilization not suggested.

This makes only four ounces, and if the child requires eight ounces at once double the quantities must be mixed. This is simply warmed and is ready for use. It is more economical and less liable to ferment than the mixture known to the profession as the Meigs' mixture. In place of the sugar water, I advise my patients to use boiled water and half a teaspoonful of sugar of milk. I also advise them to put it in the steamer and steam for from 20 to 30 minutes. This will keep for a day or two or longer in the hottest weather.

Whether the milk is prepared after this formula or not, it is always advisable to use only the upper half or third—the "top milk," as it is called "across the lines."

Within the last few weeks I have been giving this modified Meigs' mixture to a child a year old, and who was weaned four months ago. His capabilities for digestion were no greater than those of a good, healthy baby at six months. At once the mixture appeared to be digested, and now he is thriving on it better than on anything since his birth, though a short time before I had tried Rotch's preparation, and had to abandon it after a few days. Within twenty-four hours on Rotch's mixture the breath became sour; then followed vomiting of curds and the presence of curds in the stools.

Peptonized milk was supposed to completely revolutionize infants and children's feeding when first suggested by Fairchild Bros., only a few years ago. I advised it frequently for some time, and on many an occasion it appeared to work like a charm, especially in cases of gastro-intestinal catarrh. Latterly it has disappointed me, and during the last year I have not advised it more than two or three times.

Dr. Adams, of Washington, speaking of a couple of cases of gastro-intestinal catarrh in the Children's Hospital of that city not doing as well as his private patients, investigated and found that the resident physician was experimenting with peptonized and pancreatinized milk. He found that as soon as this was

stopped and properly prepared cow's milk was substituted, the cases quickly recovered.

Condensed milk is frequently recommended by physicians and largely used by the laity. It contains a large proportion of sugar, often forms fat quickly, and thus makes large children. Children fed on condensed milk, though fat, are lethargic and flabby; although larger, are far from being strong; have little power to resist disease; often cut their teeth late and are likely to drift to rickets (Louis Starr).

Another writer—Baruch, in the *Dietetic Gazette*, July, 1888—writes in a similar strain. He says that children fed on a solution of condensed milk will take more food, absorb more water into the tissues, and produce less blood and muscle. Hence they cannot resist disease, and while they appear to be nourished they are anæmic, lymphatic, and they readily become scrofulous if the tendency exists.

Sometimes milk in every form, and however carefully prepared, ferments soon after being swallowed; and excites vomiting and causes great flatulence or distress, while it affords little nourishment. With these cases the best plan is to withhold milk entirely for some time and try some other food.

Whey is a very good substitute, and frequently tides a child over a critical period. I think of one now who lived ten days on it alone, improving daily. Or barley water may be used. Or keeping a child for some hours on whiskey and water, or whiskey and water may be alternated with the barley water, or a teaspoonful or two of the juice of raw beef will often be retained when everything in the shape of milk is rejected.

Such foods are only to be used temporarily, until the tendency to fermentation within the alimentary canal ceases; then milk may be gradually and cautiously resumed.

In regard to patent foods Rotch says: "They must necessarily be unreliable; their claims are not supported by intelligent and unprejudiced investigation." Further, he thinks "it is high time for us, as physicians, to appreciate exactly how inefficient in themselves, and how misleading in their claims, are these artificial foods, and also in what a false position, as protectors of and advisers to the public, we are placed in doing anything but ignoring them." He is convinced that the merit of their, at times,

apparent success does not belong to them, but to other accompanying circumstances.

Adams (of Washington) also "desires to enter a protest against the use of the various 'infants food' as substitutes for or aids to cow's milk. Mothers are attracted to them by the warnings posted in street cars, and the pictures of plump, rosy babies distributed by the druggists. Analyses by competent and honest chemists—not paid by the manufacturers—have shown them to be rich in the ingredients they are guaranteed not to contain, and to be deficient in those which are lauded as being present in larger proportion than in any other food."

Having arrived at the conclusion that cow's milk, modified, is the most suitable article of diet for babies and young children after weaning, we must look on another side of the question which is probably nearly as important; that is, the quantity and frequency of feeding.

Many mistakes are made in regard to these points. Emmet Holt says: "It has been my experience and observation that artificially-fed children are often fed two or three times too much and also too frequently, especially at night. There is no doubt that indigestion and diarrhoea are due in many cases quite as much to the quantity and frequency of feeding as to quality of the food given." Keating, of Philadelphia, also says: "The great mistake has been overfeeding."

So crude an idea have the majority of mothers in regard to quantity that I have been in the habit of late years, in the case of children who are very ill, of putting my directions in writing, giving the kind of food, the amount, and the frequency of feeding.

If a child from 12 to 18 months is well and his appetite demands additional food to the milk, he may have stale bread broken up in his milk, stale well-cooked bread and butter, a crust, stale bread moistened with red-dish gravy from beef or mutton, a sandwich of scraped beef, almost raw, or part of a soft-boiled egg with stale bread-crumbs in it. Any of these may be given once or twice a day except the last-named.

There is no well-recognized rule of feeding applicable to all cases. Each one must be regulated by its own particular requirements, and

that line of feeding carried out which proves best suited to it. If a certain diet appears to agree with a child, as little variation as possible should be made in it. The child should be fed five or six times a day at nearly the same hours.

I do not like diet tables; as a rule, they are too suggestive of hospital life; but the following formulated by Louis Starr, of Philadelphia, seems a good one:

First meal, 6 a.m.: Cup of milk, with cream-biscuit or a slice of buttered bread.

Second meal, 8 a.m.: Stale bread broken and soaked in a tumblerful of rich milk.

Third meal, 12 a.m.: A slice of buttered bread with about half a pint of weak beef tea, or mutton, or chicken broth.

Fourth meal, 4 p.m.: Tumblerful of milk, with crackers or buttered bread.

Fifth meal, 8 p.m.: A tumblerful of milk, with bread and crackers.

By the time the child has reached the age of about two years, he is usually able to digest oat-meal or cracked-wheat, and these he may have with his 8 o'clock meal, and with the mid-day meal he may be allowed a piece of rare roast beef to suck, some mashed potatoes moistened with the dish gravy, and a little rice or farina. The other meals had better vary as little as possible from the diet table just given.

I try as well as possible to keep these little ones on an almost wholly milk diet till the dreaded "second summer" is over, and longer still if the child's digestion is not very good.

Up to this age it is probably better that the child should have its meals at a separate table rather than with the other members of the family. If it does not see food, it is not so likely to want it and get something it should not have.

Between two and three years of age, a child is often more difficult to manage than a younger one, for it can walk about and help itself to all sorts of things. Its increased growth and size demand a greater variety of food than the younger ones. Its powers of mastication, its increased flow of saliva, its improved digestion, and increased assimilation call for this. It should be fed four times a day, with a drink of milk between meals if hungry. If well, it may be allowed ripe fruits in moderation, provided care be taken to prevent it swallowing seeds

and rinds. A popular fruit is the banana; but Dr. Adams' experience has been such that he considers it more productive of eclampsia than any other fruit, and consequently he cannot recommend it. (*Cyclopædia of Diseases of Children.*)

An important point, often neglected, is the matter of drink. Every young infant requires water several times a day, and the demand increases with the age of the child. The water should be pure, and not too cold. In hot weather especially, they should have it frequently.

It is scarcely necessary to say that the major portion of this paper refers to children who are suffering from improper feeding, and not so much the well ones, whose capability for digesting all manner of things is often a marvel.

CAUSES AND TREATMENT OF CARCINOMA.

BY L. TESKEY, M.D., M.R.C.S. ENG.,
Professor Pathology, Trinity Medical College.

There are two theories as to the nature of the cause of carcinoma which appear necessary to discuss, viz.: (1) That it is an abnormal growth of epithelium, probably resulting from irritations of various kinds. (2) That it is due to the influence of a special microbe, foreign to the body, and introduced in various ways.

Doubtless the immediate effect of irritation on living cells tends towards their death and destruction rather than growth, yet reproduction and growth follow as a sequel and are the secondary result of the irritant; but in that growth in the disease in question physiological laws are disobeyed, and pathological conditions take their place. To establish a theory of this kind we must recognize the independence of the life and growth of the cells of our body—that when supplied with nourishment, normally, they grow definitely and to perform a special function; pathologically, they grow indefinitely and without function, so long as nourishment is provided. While thus looking upon the cells of our body as being a kind of independent organism, any foreign microbe would be unnecessary to produce the phenomena of the growth of cancer.

But little observation is necessary to establish

the causative influence of prolonged irritation, for it is the prolonged disturbance that is most effective, as is abundantly illustrated in epithelioma of the lip of the habitual smoker. In fact, so constantly do we find this disease located in such parts of the body as are most exposed to irritation—for example, the scrotum of the chimney sweep, the glands and prepuce of the genital organs of the male, the breast of the female, prominent warts and moles, the tips of the ears, the mouth, and the rectum—we seem justified in looking upon the relation as being that of cause and effect. I do not find any good reason for believing that this disease is hereditary, and, so far as my personal observation goes, it is the exception and not the rule to find the disease having previously existed in the family history; and where such existence is found, it could as reasonably be explained as a coincidence.

In connection with the subject of irritation, I beg to call special attention to the probable manifestation of the disease primarily at some distance from the point irritated, as illustrated by the following cases:

(1) Scirrhus in axilla from irritation of the thumb nail.

(2) Carcinoma of lymphatics of submaxillary region, and small abrasion in sublingual region.

Age appears to be a predisposing cause, and that there may be other predisposing causes is rendered probable, in view of multiple epithelioma sometimes existing.

As to the second theory, the evidence relating to the existence of a foreign germ negatives such conclusion.

One of the most valuable contributions to our knowledge on that subject will be found in the *British Medical Journal* of March 14, by Shattuck and Ballance.

I take it that not only do their experiments go to show that it is not probable that any organism such as a microbe exists, but they give presumptive evidence to the other theory advanced, inasmuch as the results are just what would be expected in accordance with it. For example, while inoculations were attempted between animals of different kinds, the inoculated material liquefied and was absorbed; like as when the blood of one animal is injected into

another, the corpuscles soon disappear; while, on the other hand, inoculations carried on with animals of the same kind were, in a degree, successful, as shown by the experiments of Dr. Hanan.

I therefore find myself believing, not as Dr. Shattock and Dr. Rollance, that a micro-organism foreign to the body would be found, but rather more probable that no such organism exists, and that the disease is due to abnormal growth of cells brought about probably by prolonged irritation, and that such irritation may be at some distance from the primary manifestations of the disease.

AS TO TREATMENT OF CANCER.

The first question which would naturally arise would be, Does nature make any effort to arrest this disease, and is it ever successful? In other words, do we ever have spontaneous cure? I think the indications are in the affirmative. How else could we account for that form of cancer called the atrophic form, where the nests appear to cease to progress and cicatricial tissues take their place?

Also we have the assertion that the complication of erysipelas may be curative. On that subject, I have no observations.

It would be difficult to account for the varied rapidity of similar forms of the disease in similar situations in different individuals without believing that there is varied resisting power.

HISTORY OF CASE.

Female patient of middle age eight years ago, having a tumor of the breast, sought medical aid, and was told by some of our leading physicians that she was suffering from cancer which required immediate operation, that she would not survive more than from six months to a year without operation, and that with operation they could not safely say that she would survive two years. About a year ago I saw the patient with her physician, who had her in charge for six years, she having declined operation. When I saw the case the right breast presented a large tumor, nearly as large as one's closed fist, of stony hardness, irregular, with retraction of nipple, and an ulcerated surface fully $\frac{1}{2}$ to $\frac{3}{4}$ in. deep and of the area of a penny. The ulcerated surface was red in color and discharging but little.

I look upon this case as one in which the efforts of nature are prevailing against the disease.

And now, gentlemen, in view of the case which I have brought before you, and in view of the disease in question being at first a purely local one, what about the more active treatments of excision? In conclusion, I beg to submit, first of all, with a view to prevention, that an abrasion fissure or ulcer resisting all treatment and showing no tendency to heal under proper treatment for a period of two months should be excised.

(2) That excision is curative, but curative only while the disease is local and the operation carried wide of the parts affected, best done when the disease attacks the extremities.

(3) That after the lymphatics are affected, speaking generally, the value of operating is doubtful, and generally hastens, rather than delays, the fatal result.

This last conclusion I have reached believing that the excessive hemorrhage attending such operations lessens the resisting power and favors more rapid progress of the disease afterwards.

Selections.

LITHOTRITY IN CHILDREN.

BY F. A. SOUTHAM, M.B. OXON., F.R.C.S.,
Surgeon to the Manchester Royal Infirmary and to the Clinical Hospital for Women and Children.

In *The Lancet* of Feb. 15th, 1890, I published a case of lithotripsy at a single sitting in a boy aged three years and a half, and since that date I have performed the same operation in five additional cases, brief particulars of which are here given:

Case.	Age.	Size of stone.	Structure.	Weight.	Duration of operation.	Result.
1	3½	Oval: ½	Ur. acid.	15	25	Up on 3rd day, discharged on 7th.
2	10	½ × ½	"	45	70	Up on 5th day, discharged on 21st.
3	4	¾ × ¾	"	14	30	Up on 4th day, discharged on 7th.
4	5	1½ × 1	"	125	60	Up on 2nd day, discharged on 2th.
5	5	Oval: ½	"	13	20	Up on 2nd day, discharged on 8th.
6	3	" ¾	"	32	45	Up on 4th day, discharged on 7th.

In each instance the result has been extreme-

ly satisfactory, confirming in every respect the Indian experiences of Surgeon-Majors Keegan and Freyer, who were the first to advocate and practise this method of treating stone in male children. In performing lithotripsy in young subjects, one is surprised to find how extremely tolerant the bladder is of prolonged instrumentation, the essentials for success being, in the words of Surgeon-Major Keegan, "great gentleness and a light hand." With two or three ounces of fluid (boric lotion) in the bladder, and the pelvis and thighs of the patient slightly raised, so that the stone may fall back upon its posterior wall, the operation is a very simple one; in fact, much easier of performance than in an adult, the absence of any pouch or depression behind the prostate facilitating the seizure of the calculus and the removal of the fragments after it has been crushed.

Before deciding upon lithotripsy in a child, it is, I think, advisable to know the exact size of the stone. This can be best estimated by measuring it with a small lithotrite when the child is sounded; more satisfactorily of course if the examination is made under anæsthesia. As cystitis is usually present to a greater or less extent, the bladder should at the same time—viz., while the patient is under the influence of the anæsthetic—be thoroughly washed out with boric lotion. For a few days previously to the operation the irrigation should be repeated each morning, an anæsthetic not being necessary. By this means the condition of the urine is improved, the cystitis is relieved, and the urethra becomes accustomed to the passage of instruments. If a soft India rubber catheter is used for the purpose, it causes scarcely any pain, and is usually well tolerated by the patient. In cases where the urine is very offensive—as happened in Case 2—small doses of boric acid may also be given internally. In none of my patients has it been found necessary to continue the irrigation after the operation, the removal of the calculus having been followed by a subsidence of the symptoms of cystitis. I am of opinion that by the employment of what we may term "urinary antiseptics"—drugs, such as boric acid, salol, etc., by means of which we are able to sterilize foul or toxic urine, and at the same time relieve inflammation of the bladder walls—the risks and after-complications of lithotripsy in

children, as well as in adults, are greatly minimized. As the operation is often somewhat prolonged, it is very important to guard against exposure to cold, and also to diminish as far as possible the effects of shock. With this object I always take care that the body and limbs of the child are wrapped in flannel bandages, and during the operation the patient lies upon a large, flat, hot water tin, covered over with a blanket, which fits on the operating table. If hot fomentations are applied to the lower part of the abdomen and perineum after the operation, the child will usually pass urine in the course of a few hours without any straining or difficulty, and, beyond a slight smarting, with very little pain, usually much less than previously to its performance. In only one of my cases has there been any rise of temperature, and the following morning the patients have all been practically convalescent. It is, however, advisable to keep them in bed till the third or fourth day, when they may sit up in the ward, and at the end of a week they are usually quite fit to leave the hospital. In each instance the operation was performed with Weiss's Nos. 5 and 7 children's lithotrites, and the fragments removed with Nos. 6 or 8 evacuating tubes. In Case 4, as the stone was too large to be crushed with No. 7 lithotrite, it was first broken up with one of Weiss's small lithotrites for adults (about No. 9 size), and the operation was completed with Nos. 5 and 7 lithotrites. This case illustrates the fact that a calculus of considerable size—viz., over an inch in diameter—may be safely crushed in a young child. I believe that in the future lithotripsy will quite supersede lateral lithotomy in children, and also that if a stone is too large to be crushed it will be an indication for the selection of the suprapubic operation.—*Lancet*.

THE FUNCTIONAL DISORDERS OF THE VOCAL MECHANISM.

Abstract of Paper

BY JOHN WYLLIE, M.D., F.R.C.P. EDIN.,

Physician to the Royal Infirmary, Edinburgh.

Two mechanisms in exact co-ordination with each other are concerned in the production of speech. 1. That of the larynx, which is the producer of the vocal element. 2. The oral element, by which the sounds of the larynx are

modified, and by which new sounds produced within the mouth itself are added to the vocal tones of the larynx. If the ordination becomes imperfect, the speech is at once interrupted and labored. That the defect of speech in the common variety of stammering is due to deluged action of the laryngeal mechanism in attacking the first syllable of words is an old proposition, which is maintained to the present day by the best observers. The truth of this is shown by many familiar proofs. Thus, the stammerer rarely, if ever, has the slightest difficulty in song. In like manner, they rarely have trouble if they intone or read poetry. All this shows that when a primary demand for voice is made, as in song, or other forms of rhythmical speech, sufficient energy is supplied to the laryngeal mechanism to cause the difficulty to disappear.

Intelligent use of the voice is one of the essential elements of speech, and this can only be fully attained by a knowledge of individual letter-sounds. Such a knowledge will enable him to readily throw the voice into the vowel or consonant that contains voice, and to touch off lightly any consonant that does not contain voice, bringing the voice out immediately in the vowel or vocalized consonant that succeeds it. For this purpose the author has prepared an alphabet, so arranged that the voiced elements are separated distinctly from the voiceless. Such alphabets are not new. They have been constructed by Arnott, Pitman, in his phonetic system, Max Muller, Bristow, and others.

In studying the phenoma of stammering, three general causes are final :

(a) Faults in the local mechanism, by which term is meant not only the larynx, but also the lungs and muscles of respiration.

(1) Want of promptitude in the supply of voice during the pronunciation of the initial syllable.

(2) The voice may not only lag, but may also be feeble in quantity, because the speaker does not fill the lungs with air, but attempts to speak from a half empty chest.

(3) The voice sometimes breaks from its natural pitch during a struggle in speech and assumes a much higher key.

(4) There may be drawback phonation, the result of an attempt to speak during an inspiring effort.

(b) Faults in the oral mechanism, caused by surcharge of energy.

(1) The lagging of the voice and misdirection of energy cause the stammerer to surcharge his oral mechanism with energy so that he sticks at his explosives and prolongs his fricatives and nasal resonants.

(2) From the nerve-centres of oral articulation thus surcharged, an overflow in some cases occurs, producing spasmodic movements in the face and sometimes in other parts of the body. The most common of these are spasmodic twitchings of the lips and cheeks, working of the jaw, and forcible winking of the eyes.

(c) Overflow into the upper glottis. In a few cases, the energy imperfectly supplied to the vocal mechanism flows excessively, not only into the organs of articulation, but also into the upper or non-vocal parts of the larynx. This part has the false cords for its inferior margin, which is unclosed during phonation. If, however, the false cords close over the true and shut off the passage of air by their valvular action, the voice is at once interrupted and the patient, with open mouth and congested face, silently struggles without being able to emit the imprisoned air.

In beginning treatment it is best to first explain clearly to the patient the nature of his defect, and to show him that it is not the mouth, but the larynx that is at fault. He must therefore attend only to the voice and speak in a full, resonant, but natural tone. He should practise reading aloud, at first poetry, then prose. If he has an ear for music, he should cultivate the voice in song. He should be taught the physiological alphabet for which complete instructions are given by the author. He must be taught to fill the chest with air, but if he grasps the great principle of speaking with voice he does this instinctively. Extreme cases requires the instruction of a specialist, but, as a rule, persevering and intelligent practice will enable the patient to effect a cure for himself.

The prognosis depends largely upon the intelligence of the patient. Age is an important factor, being favorable between twelve and sixteen. Cases with severe spasmodic complications are unsatisfactory.—*Edinburgh Medical Journal*.—*Archives of Pediatrics*.

ABDOMINAL TUMORS FROM RETENTION.—

In the examination of unusual conditions of abdominal enlargement it is difficult to make sufficient allowance for what is possible in the way of passive distension of the viscera. The urinary bladder may fill the belly, and even the gall-bladder may go far towards the same result. The ordinary cause of what is called "pot-belly" is accumulation of fæces in the intestines. In the rabbit, and perhaps in most herbivora, it is, strange as may seem the statement, usually the cæcal appendix which undergoes distension, whilst in the human subject the cæcum and colon is the tract involved. I am induced to ask attention to this matter on the present occasion from having recently read the following abstract of a case published by an Australian surgeon. It proves that a knowledge of what is possible is of great importance in order to the avoidance of most grave errors in practice :

"A remarkable case of fæcal accumulation is reported by Dr. R. Worrall in the *Australasian Medical Gazette*. The patient was a girl, aged thirteen, of a cachectic appearance, who had a rapidly growing abdominal tumor. Aperients were given, and for several days a large quantity of very offensive fæcal matter was discharged, but without any noticeable effect in reducing the volume of the tumor. As the child was evidently sinking, it was determined to make an exploratory laparotomy, the supposition being that the tumour was malignant. On opening the abdomen, however, the swelling was found to be an enormous accumulation of fæces in the cæcum and colon. The operation seemed to have had a stimulating effect upon the bowels, which acted almost continuously for a few days. In six days the tumor had entirely disappeared and the child made a good recovery, her life having probably been saved by an error in diagnosis."

Dr. Worrall's narrative brings to my mind a precisely similar case which came under my own observation many years ago. I was consulted by my friend Dr. Mundie, formerly of Dalston, in the case of a young girl who had "an abdominal tumor." The child was about twelve years old, pale and emaciated, and her abdomen was as large relatively to her body as that of the last month of pregnancy. She was confined to her bed. I found to my astonish-

ment that in pressing the fingers firmly upon the swelling an indentation was left, as if it were so much dough. Further examination convinced both Dr. Mundie and myself that this was due to distension, by soft fæces, of an enormously dilated colon. The rectum was found to be full of the same. Suitable measures were adopted—first the spoon, afterwards enemata, aperients, and nux vomica—and the child was soon relieved of the accumulation and restored to fair health.

It must never be forgotten that in these cases there is often no obvious retention. In the one which I have just narrated there was, if I remember correctly, reputed incontinence of fæces and not constipation. This is constantly the fact in instances of over-distension of the urinary bladder, and it misleads often both the patient and the practitioner. In a very early period of my career I once tapped a woman's abdomen with a small exploring trocar and drew off urine. Fortunately no harm followed and I learnt a lesson. On another occasion, much more recently, I was taken into the country by an accomplished gynecologist to assist in the diagnosis of a large tumor which had puzzled him. The result of our examination was that we passed a catheter and took the tumor quite away. The lady had been voiding urine freely, and this had caused the mistake.

In at least one case on record, the abdomen has been laid open for ovariectomy, and the tumor then found to be a distended gall-bladder.

In the male subject I have known many blunders as to the diagnosis of a distended urinary bladder. Six or eight years ago an elderly gentleman travelled up from Devonshire to consult me with what he had been told was an incurable tumor in his abdomen. It was nothing but his bladder, but it presented the unusual feature of being not in the least tense, and, although it reached the navel, it felt loose, and could be easily pushed from side to side. Catheters were used, and, after the not unusual attack of cystitis as a result, recovery followed. This patient is, I believe, at the present time in the enjoyment of good health. It is a curious fact that in this, as in most other cases of painless vesical distension, no cause of obstruction could be discovered. They appear to be examples of simple atony.

During the last year I have attended another case exactly like that just narrated. An old gentleman, who averred that he had never in his life had the least difficulty in passing his water, had a very large abdominal tumor. A medical consultation took place, and a grave diagnosis was given. A week or two later I was consulted. I found the tumor quite lax, and easily swayed from side to side, but as it fluctuated and was in the middle line I could not doubt that it was the bladder. The catheter proved the correctness of this surmise.

I may venture to offer the following categorical memoranda for the avoidance of error in the recognition of abdominal retention-tumors:

(1) The distension, although enormous, is usually quite painless.

(2) The retension is never absolute, but only residual. There is always overflow.

(3) The patient never assists the surgeon, but rather misleads him, insisting that there is free relief of bowels and bladder.—*Jonathan Hutchinson in Archives of Surgery.*

ON THE USE OF THE ECRASEUR FOR TONGUE OPERATIONS.—In advocating the use of the ecraseur-wire (cold) for removal of the tongue or of parts of it, I am influenced solely by the belief that it is a much safer instrument than knife or scissors. It is quite true that by carefully tying each artery as cut, a dexterous surgeon, with good assistants, may get through an excision of the tongue with but very little loss of blood. Even in the best hands, however, exceptional cases will every now and then occur, and it is these which spoil the statistics. It is not merely the loss of blood which is dangerous, but there is always risk that some of it may find its way into the air passages. The loss of blood is, however, to the old and feeble persons, who are often the subjects of these operations, not a matter to be lightly thought of. That ecraseur operations are safe, that no risk whatever attaches to the sloughy surface which the wound is apt to assume a few days afterwards, I can testify from very considerable experience. For many years I have never used any other instrument, and, with the exception of one at the London Hospital, I have never lost a single patient. The division of the tongue is always accomplished without any bleeding, but after it is complete I

always seek the lingual arteries and try to provoke them to bleed in order to tie them. This is done by way of precaution, for since I abjured the cautery wire I have had no trouble with secondary hemorrhage. The bleeding of the linguals referred to is always very feeble, just sufficient to reveal the artery and no more. It never involves any risk of blood passing back into the throat. I now always use a cold iron wire and cut very slowly, taking at least half an hour to the procedure. It is not a showy operation, but I repeat that I believe it far safer than any other. As regards the place of election, I always now content myself with being well behind the disease, and by no means regard it as essential to take the whole tongue. If the disease is on one side, the line of section crosses the tongue obliquely. There is no inconvenience as regards subsequent speech from these oblique divisions, and I very decidedly prefer the stump left by them to that resulting from the removal of one longitudinal half of the organ. One great advantage which, in my opinion, attaches to the ecraseur is that operations by its aid require patience only in order to success. They may be performed by any one at any time, and the operator is but little dependent upon his assistants. This is an advantage not to be despised when we remember that the circumstances under which cases of cancer of the tongue first come under surgical observation are often such as do not permit of immediate recourse to a hospital or to a surgeon of special experience in such cases. Were operations of this kind less formidable in the general estimation of the profession, we may feel sure that they would often be performed at much earlier periods; and this, after all, is the grand condition as regards permanent results.

Postscript.—Since the above was written, I have received the ninth volume of the "Transactions of the Royal Academy of Medicine of Ireland," which contains an important paper on "Excision of the Tongue for Cancer." The paper is by Mr. Croly, and warmly advocates ligation of the lingual arteries as a preliminary to the operation, thus bearing testimony to the fact that, despite modern methods, the risk of bleeding is, to him, still a matter of considerable anxiety. In the course of the discussion, Mr. Lestaigne stated that "he had seen several cases

in the hands of excellent surgeons where very severe hemorrhage had occurred." These admissions quite accord with facts which come to my own knowledge; for although some of my friends who use scissors speak very lightly of bleeding, I still hear not infrequently of cases in which it proved severe, and in all probability much prejudiced the patient's prospects.—*Jonathan Hutchinson in Archives of Surgery.*

CASE OF CHOREA TREATED BY CHLORAL HYDRATE.—The following is a case which recently occurred in the Bristol General Hospital, where I was physicians' assistant at that time, and which, as it may be of interest, I am allowed to publish by the kind permission of Dr. J. Mitchell Clarke:

A. Y—, a strong, well-nourished girl of fourteen years of age, engaged as a pupil teacher in a national school, was admitted on Aug. 24th for rheumatism accompanied with chorea. It was her first attack, was mainly right sided, and presented no unusual feature; it was attributed to excessive mental work. She improved with rest and treatment—viz., first salicylate of soda, and subsequently Fowler's solution—up till Sept. 3rd, when, under the agitation caused by the conduct of a patient in a neighboring bed, she fell into a state of furious excitement. Her movements became incessant and maniacal in character, so violent that she was constantly being thrown out of bed, and had to be tied down with boards let in at the sides. She seemed conscious all the while and to understand what was said; she obviously, for instance, tried to answer questions, but could not frame the words. She was at once isolated, and at night chloral, at first combined with bromide of potassium, was given in fifteen doses of each, the arsenic being continued during the day. On the night of Sept. 4th I gave her thirty grains of each without producing any sleep, and increased it to forty on the night of the fifth with equally little effect. On Sept. 6th, as she was becoming completely worn out, and had had no sleep since Sept. 3rd, while it was obvious that if the movements were not in some way checked she must, sooner or later, die, I administered chloroform. She was kept under for several hours, but when she came round was as bad as ever. It was then de-

termined to make a systematic attempt to chloralize her, and for the next four days doses were administered at frequent intervals, according to the results produced. It was given not so much with the intention of producing sleep as with that of checking the movements. She was, of course, under careful observation, special attention being paid to the temperature and the state of the pulse. The quantity given at each dose, and the intervals between the doses, were left to the judgment of the resident officer in charge at any given time; for instance, she was never roused from sleep except to be fed, and, if one dose was ineffectual, another was given within the hour. Acting on this method, within a few hours from the time that chloralization was begun on the night of Sept. 6th, she was got under the influence of the drug and kept more or less so for the next four days, the quantity required to produce the effect being altogether about a hundred grains daily. She was fed by the mouth when possible, but enemata of milk, eggs, and brandy were frequently administered also. During the height of the attack her temperature rose to about 103° and kept at that level with slight fluctuations. This was probably due to the waking up of the rheumatism she had suffered from in the beginning, because she exhibited signs of pain and tenderness in the ankles, though there was no swelling there, and because at this time, and not till then, a very loud systolic murmur was to be heard at the apex, which could be heard up to the date of her discharge. It is worthy of remark that the chloral had no perceptible effect on the temperature. By Sept. 11th the violent movements had entirely disappeared and she would sleep for hours after the administration of one dose of ten grains. She had gained ground so far that the choreic movements were decidedly less marked than they were just before this acute exacerbation. The probability, indeed, is that if the chloral had been further pushed a few days more she would have been entirely cured of chorea. But, reduced as she was, in the absence of urgent symptoms, and bearing in mind the cardiac mischief, it was considered better to reduce the quantity of the drug and substitute tonic treatment as soon as possible. From the result of this case it seems probable

that we could—at the expenditure, it is true, of considerable trouble—reduce very materially the length of time spent in the cure (or watching rather, for it is surely doubtful whether the patient recovers any the sooner for the exhibition of the drugs ordinarily used) of cases of chorea.—*B. Baskett, M.R.C.S., etc., in London Lancet.*

IN PRAISE OF GOUT.—“I shall be happy to hear that my friend Joseph has recovered entirely from his late indisposition, which I am informed was gout; a distemper which, however painful in itself, brings at least some comfort with it, both for the patient and those who love him, the hope of length of days, and an exemption from numerous other evils. I wish him just so much of it as may serve for a confirmation of this hope, and not one twinge more.”

The above quotation is from one of Cowper's letters, and well expresses the popular creed as to gout which was entertained during the eighteenth century. Since then we have become acquainted with granular kidneys and degenerate arteries, and our views as to the significance of podagra have received some modification. It may be suspected, however, that in this matter medical opinion has advanced faster than that of our patients. Many of the latter probably still share the believe of our good social poet. It may be suspected, too, that after all there was much truth in the old creed, and that to have gout is not in itself a bad omen in reference to longevity. Many gouty persons are undoubtedly to a large extent free from other maladies. They are persons who, as a rule, avoid and escape most of the diseases incident to low tone. They live up to their digestive powers, and do not so easily succumb to debilitating influences as some who adopt more abstemious habits. It must be remembered, too, that they usually come of good stock, and that their predecessors for some generations have been of vigorous stamina, and accustomed to live liberally. It is better to have a tendency to gout than to verge towards scrofula, anæmia, or neurasthenia, and to a large extent (though not absolutely) the one does exclude the others. If the man who has had an attack of gout will only allow it to serve as a warning, and hence-

forth select his wine with judgment, avoid all fruit, take plenty of salt, keep his bowels open, and never neglect exercise, it is probably still true that he has before him “the hope of length of days, and an exemption from numerous other evils.”—*Jonathan Hutchinson in Archives of Surgery.*

SENILE HYPERTROPHY OF ARTERIES IN A TOTAL ABSTAINER WITHOUT CALCAREOUS CHANGES.—

A case which in some respects I may contrast with the preceding one was that of a gentleman, aged seventy-two, who had been a total abstainer all his life. I was consulted on account of strangulated hernia, and was warned by his medical attendant that he had extensive disease of his heart and arteries, and would be a bad subject for chloroform. Notwithstanding this, as the anæsthetic was needed, we at once administered it, and he took it quietly, without the slightest undue disturbance of his circulation. The statement as to his pulse, however, was quite correct, for he had a most extraordinary condition of senile enlargement of his arteries. They were neither tortuous nor calcareous, but simply enlarged and thickened. His radial of both wrists felt almost as large as a cedar pencil, and beat vigorously. There was an intermission at every six beats. So far as I examined him I believe that the enlargement of the arteries was general, although not to so great an extent in other parts as in the radial. There was no murmur in connection with the heart, but it was probably somewhat enlarged. If we now ask as to the influence of this state of the arterial system on the patient's health, I have to record that its subject was a man who might be considered an example of perfect senile vigor. He was tall, thin, and florid, with a beautifully clear complexion, and not the slightest trace of duskiness. I believe he had never suffered from any discomfort at his heart. He was accustomed to take a daily journey from the suburbs to his business place in the city, and he could walk well. His boast was that until his present illness he had never spent a day in bed.

This case may be considered to prove that senile hypertrophy of arteries is not in any way secondary to other disease, that it has no connection with the use of alcohol, and is not necessarily attended by any inconveniences.—*Jonathan Hutchinson in Archives of Surgery.*

LADIES' DRESSES AND CONTAGION. — We have already had occasion to notice the supposed influence of the trains of ladies' dresses in spreading contagion. The matter has been warmly taken up in Vienna and Pesth, and we now learn that a regular crusade has been instituted by the Sanitary Board of Hungary against the obnoxious fashion: It is not to be expected that the justice of this course will pass unquestioned. By very many persons it will certainly be regarded as an instance of the mere enthusiasm of sanitation, having but the slightest foundation in reason or science, and as little connection with practical cleanliness. There is some room for argument on both sides, nevertheless. Granted that the germs of disease abound in a given quarter, no ordinary means could more effectually ensure their dispersion than the broom-like action of a flowing skirt. On the other hand, it is to be remembered that this very movement implies an admixture of air and oxygenation of the dust cloud. Then, again, one is tempted to inquire whether a reduction of the length of train is the best method of dealing with this question of germ dispersion by means of street dust. Would it not be better, in combating whatever contagion may linger among its particles, in spite of a purer surrounding air and sunlight, to rely upon the sanitary water-cart or hose and the scavenger's brush? If dress fashions are to be held responsible and forbidden, are the whirl of traffic and the bustle of hurrying pedestrians, though they wear no trailing robe, to be restrained also? We admit a cordial dislike to this latter garment, both on account of its close and clinging unwholesomeness as regards the wearer and on the ground of its public inconvenience. Nevertheless, the surest remedy for infection by means of dust is, in our opinion, rather to be sought in the cleansing of thoroughfares than in the restraint of fashions in dress.—*Lancet*.

FRACTURE OF THE HYOID BONE.—On Wednesday afternoon Mrs. C., æt. 25, called and wished me to treat her throat, saying that it was sore. She could then speak only in a whisper. In my examination I found the pharynx swollen and congested, and as the tongue was depressed it caused severe pain and suffocation. Externally over the hyoid there was marked

ecchymosis. She confessed that on Monday evening, this being Wednesday, when in a quarrel with her husband, he had grabbed her by the throat and choked her twice. The first time he did not exert much force; then, renewing his attack the same as before, he choked her until suddenly she experienced a very severe pain and fainted. She was put to bed, and during the night she suffered extremely from suffocation, deglutition being very difficult. On Tuesday she felt a little better, but could only take liquid food, and even that she thought would suffocate her. That night she was about the same, but grew worse on Wednesday, and then consulted me. The swelling was so great that I could not determine the exact condition at that time, so prescribed Slevin's inhalation and poultices to the neck; this reduced the swelling so that on Thursday, by having an assistant hold the tongue out as far as possible, pressing my finger down the throat, compressing externally, I could distinctly feel the fracture of the greater cornua, near the attachment of the hyoglossus, all the pain and tenderness being at this point. I asked for a consultation, which was granted; the consultant agreed with me in my diagnosis. Will report the result and treatment later.—*A. L. Sherman, M.D., in Times and Register*.

A CURIOUS RESULT OF AN OPERATION FOR CONGENITAL HERNIA.—The contents of hernial sacs as revealed by operation are of the most varied description, but a remarkable surprise in this respect was the result of surgical interference undertaken by Jules Bœckel, of Strasburg, the other day, for the relief of a congenital hernia. The patient was a young man, æt. 20, for whose condition it was suggested to perform the radical cure. In the course of the operation the hernial sac was found to be empty equally with the inguinal canal. But to the posterior wall of the sac was attached a triangular-shaped body; this was drawn outwards and removed and the skin wound closed. Convalescence was established at the end of ten days. On a subsequent examination of the part removed the following curious facts were revealed: There was a double-horned uterus, the cavity of which was lined with ciliated epithelium; a Fallopian tube and a testicle with the epididy-

nis and vas deferens; a large ligament enclosing and supporting these two organs. The patient in other respects was a well-formed man, despite the fact that he was born with a uterus.
—*Medical Press.*

THE COBWEB AS A STYPTIC.—When Bottom was “translated” and introduced to the attendants of Titania, he endeavored to ingratiate himself with Good Master Cobweb by saying, “When I cut my finger I will make bold with you.” To arrest bleeding the application of a cobweb to the wound has long been a rural custom. Experience has shown that the gossamer of which the web is composed forms a very useful styptic; but a very fatal objection to its use arises from the fact that as an application to an open wound it can never be guaranteed to be surgically clean, forming, as it does, a net for insects, and at the same time for the germs of many an infectious disease. Evidence of this was produced before the Liverpool coroner recently touching the death of Martha Roberts, who, following the time-honored custom, had applied a cobweb to her wounded hand to stop the bleeding. Blood poisoning followed upon its application, and this terminated, unhappily, in a fatal issue. It is not a solitary case. The principles of asepticism have not yet become part of the intellectual equipment of the people, neither have its lessons succeeded in overcoming prejudice.—*Lancet.*

A CURIOUS PATIENT.—As good an instance of surgical wit as can be found is still told about the staff of one of this city’s hospitals. A dangerous operation was being performed upon a woman. Old Dr. A—, a quaint German, full of kindly wit and professional enthusiasm, had several younger doctors with him. One of them was administering the ether. He became so interested in the old doctor’s work that he withdrew the cone from the patient’s nostrils, and she half roused and rose to a sitting posture, looking with wild-eyed amazement over the surroundings. It was a critical period, and Dr. A— did not want to be interrupted. “Lay down dere, voman,” he commanded, gruffly. “You haf more curiosity as a medical student.” She lay down, and the operation went on.—*N. Y. Medical Record.*

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HIGHER EDUCATION FOR WOMEN.

Is it possible, in our schools, to give too much encouragement to girls who contemplate a course of, what we are accustomed to call, higher education? Are women equally fitted with men to enter the learned professions, and to compete with them in the various employments of life hitherto solely occupied by men? It may be thought that these questions have long ago been definitely settled, and there is no more to be said in objection to the great “advance” which has of late years been made in the facilities afforded for the education of girls and women. It is well, occasionally, to pause and calmly consider the opposite side of a question when we find ourselves being carried on by the current of popular enthusiasm. An article appears in the *Lancet* which will excite a great deal of interest and criticism. It is an oration on “Sex in Education,” delivered at the Medical Society of London by Sir James Crichton-Browne, M.D. He considers the tendency is unphysiological of ignoring intellectual distinctions between the sexes, of assimilating the education of girls to that of boys, of throwing men and women into industrial competition in every walk of life, and of making them compeers in social intercourse and political privileges; he thinks this tendency likely to lead to most disastrous results.

Dr. Crichton-Browne, at the outset, proceeds to trace out several bodily differences between the sexes. He deals more particularly with differences in the brain. After studying the results of an extensive investigation, he states that “all available evidence points to the conclusion that

the male brain exceeds the female brain in weight in this country to an even greater degree than has been hitherto supposed." The same differences in brain weight have been found in savage races. He quotes Broca in stating that the occipital lobes are more voluminous than in the male; the occipital lobes being, in his opinion, certainly sensory in their functions, whilst the motor areas of Ferrier in the parietal lobe are larger in the male than in the female. There is a superior symmetry of the female brain, due to the comparative poverty of secondary gyri. The specific gravity of the grey matter in every lobe of the brain in the female was lower (in a number of cases examined) than in the male. That the grey matter is of less density is probably due to the fact that it is less highly nourished in the female. Some interesting facts with regard to the vascular supply of the brain have recently been elicited by experiments by Dr. Crichton-Browne and Dr. Sydney Martin; the anterior portion of the brain is comparatively more copiously irrigated with blood in men and the posterior region in women. "The region of the brain which in men is most richly flushed with blood is that which is concerned, we have reason to believe, in volition, cognitions, and ideo-motor processes; while the region which in women is most vascular is that which is mainly concerned in sensory functions. There is a relation between the size of the cerebral arteries and what observation has taught us as to the intellectual and emotional differences between the sexes." We are reminded that all through life the male brain differs from the female in "capacities, aptitudes, and powers." Differences early assert themselves. Thus Thackeray has said that little girls make love in the nursery and practise the arts of coquetry on the page boy who brings the coals upstairs; and as for the page boy, it is certain that his pugnacious propensities are already fully developed, and have brought him into conflict with his brother buttons. And differences are most patent of all in the prime of life, when man, "for contemplation and for valor formed," by "his fair large front and eye sublime" declares "absolute rule," and when woman, "grace in her steps, heaven in her eye, in every gesture dignity and love," stands conspicuous for "soft-

ness and sweet, attractive grace." And differences subsist to the last. The aged spinster left in "maiden meditation fancy free" lavishes her altruistic emotions on cat, poodle, or parrot; and the hoary veteran, fidgety and irascible, concentrates his egotistic attention on his own liver; and these differences in brainstructure and function, which at every stage of existence separate the sexes, have a special pathological significance at the period when sexual divergence is taking place most rapidly, and when education is being pushed forward with most vigor.

Before the high school era dawned in England girls lived and learned and reasoned in a way, and in introducing them to the higher erudition these schools have withdrawn them to a large extent from homely household occupations, which were not without their educational value, and have substituted the dogmatic teaching of the hireling for the precept and example of the mother. Dr. Crichton-Browne remarks that if the high schools are faithful to prepare their pupils to become efficient wives and mothers, they should add housewifery in all its branches to their present curriculum. Four years ago the author of the article in question met, in the country, a high school girl who was reading Lucretius for her recreation, but she failed lamentably in the task prescribed of boiling a potato. "Now," Dr. Browne adds, "I am sure much more of the happiness and wholesomeness of life hinges on the boiling of potatoes than on the interpretation of Lucretius and his dark and doubtful sayings." In criticising an authority on overwork he says: "I read some time ago a paper by a distinguished authority on educational subjects, Dr. Emily Bryant, in which she argued that it is impossible to overwork girls, their inherent indolence and frivolity being proof against any stimulus that can be applied to them. Well, I would answer Dr. Emily Bryant that it is possible to overwork horses—witness splint, curb, thorough pin, and back sinew—and surely girls are not more obdurate than horses."

A most interesting and suggestive part of the paper deals with an investigation carried on concerning the health of high school girls in England. We find that of 187 girls belonging to the upper and middle classes, well fed and

care for, and ranging from ten to seventeen years of age, as many as 137 complained of headaches. Sir Richard Owen once stated that "children have no business with headaches at all, and, if you find that these occur frequently in any school, you may depend on it there is something wrong there." And so there must be something radically wrong in high schools that produce so copious a crop of cephalalgia. Again, a train of nervous disorders are said to arise from the same source. Thus the mental failure which follows upon severe overpressure and may be summed up as acute or apathetic dementia is an instance. "But besides apathetic dementia there are, of course, many other mental aberrations to which overpressure may lead up, the nature of these, in each case, being determined by the inherited tendencies, antecedents, or environments of the girl. We may have cyclones of mania or anti-cyclones of melancholia, hurricanes of morbid influences or the settled bad weather of moral perversion. And as regards certain minor mental changes which thus arise, it is noteworthy that they are often concealed by girls who do not comprehend and can scarcely describe them. This is particularly the case with reference to those voluminous mental states described by Dr. Hughlings Jackson which are sometimes the harbingers of epilepsy."

In addition, these victims of higher education are said to labor under a gastric disorder now so common that it might receive a distinctive appellation and be called *anorexia scholastica*, in which the lessened flow of energy from the exhausted nerve centres retards the functions of all the abdominal viscera.

Dr. Crichton-Browne warns us that the head-achy girl is not unlikely to grow into the migrainous and invalid woman. A voluminous mental state may develop into epilepsy; somnambulism may lead to hysteria; insomnia lay the foundation of insanity; and anæmia at the growth period may entail lifelong debility. Overpressure operates on the high school girl at a great epoch of her life—at puberty, and during the pre- and post-pubertal periods—when momentous changes are taking place in her body and mind, and when a wave of irritability sweeps through her nervous system. The grand truth to be inculcated in all high school

authorities is this: That they have to deal with girls at a period in life when vital resistance is greatly reduced, when the liability to disease is proportionately augmented, and when physiological indiscretions are peculiarly hazardous. One of the remote evils of overpressure in girls will be the propagation of phthisis in those who have been subjected to that overpressure. The indoor life of the girls, their sedentary habits, and the stooping posture in which they pass much of their time bring the lungs into a state that is favorable to tuberculous infection. The lungs are comparatively immobile, and there is consequent inactivity of the respiratory current in them, with a tendency to congestion and catarrh. Chorea, also, we are told, is a malady which, perhaps more than any other, may be directly attributed to overpressure and nervous strain."

The author of the article states that "Five men suffer from the motor form of writer's cramp for every one woman who so suffers, and the explanation of this lies on the surface, in the fact that men are employed in writing far more numerously than women. Four men die of general paralysis of the insane for every one woman who so dies. Is it not feasible to suppose, then, that women owe their comparatively small liability to this fell malady to their comparative freedom from the stress and striving of professional and business life which so often lead up to it in men? To make women katabolic—and that is, Dr. Browne maintains, what high school education tends to do; to throw them into competition with men—and that is what some high school education aims at—is to ensure them a largely increased liability to organic nervous disease. And so overpressure from ten to seventeen years of age may have amongst its remote consequences not only the reproduction, in the same or modified forms, of the functional nervous disorders which so often manifest themselves at that period, but a crop of gross nervous degenerations which have, up to this time, been rarely seen in women; and, notwithstanding all Wiedemann's arguments, Dr. Browne remarks: 'Woe betide the generation that springs from mothers amongst whom gross nervous degenerations abound.'"

In discussing the action of one of the Scotch universities in opening its class rooms to

women, Dr. Crichton-Browne states: "I must, however, even now express my belief that the University of St. Andrews, in deciding, as it has lately done, to open all its classes in Arts, Science, and Theology, to women as well as men, has taken, not a retrograde step—for our ancestors never did anything so foolish—but a downhill step towards confusion and disaster. Its now empty benches may be thronged with pupils, its professors may fatten for a time on duplex fees; but the attempt to educate young men and women, not only on the same lines, but in the same coaches, cannot but prove injurious to both. 'What was decided amongst the prehistoric protozoa cannot,' it has been well said, 'be annulled by Act of Parliament, and the essential difference between male and female cannot be obliterated at a stroke of the pen by any senatus academicus. To essay such work is to fly in the face of evolution.'

In summing up the evidence advanced, Dr. Browne concludes his interesting paper as follows: "With this divergent differentiation of the sexes has come more reciprocal dependence and higher harmony. It is no question of superiority or inferiority of the one sex to the other. Each sex is higher, each is lower; together they make up the perfect whole, separate they are infirm; in union they are strong, in competition they are mutually destructive. It is in the sympathetic accord of the differentiated sexes that human progress can alone be hoped for. Men and women are constitutionally adapted to different work in the world. To set them to do the same work is wasteful and detrimental to the sex that is less adapted to it. It is impossible to contemplate with complacency some of the experiments in this direction which are being carried out, and it is impossible to speculate, from a medical point of view, without apprehension, what the outcome of such experiments may be, or what high school and college and hall education may do for the country in a few generations if they be pushed on with relentless zeal."

THE THERAPEUTIC VALUE OF LILY OF THE VALLEY.

For some years past there have been occasional magazine and other fugitive articles about this drug, so well known as a plant, but

so little known and used as a drug. Its Linnean name is *Convallaria majalis*: N.O., Liliaceæ; part used, the whole plant, or any part of it; preparations differing, as we shall see, in properties according as the flowers, stems, or rhizomes and rootlets are used: habitat, the temperate northern hemisphere: wild and cultivated. The Caucasus is particularly rich in the plant, and it has been long in use in southern Russia among the peasantry. Clinical observation has been amassing upon it, so that a reliable statement may be made of its value and use.

Its active principles are two, at least the important ones: *Convallarin*, a glucoside, crystalline and acrid, residing chiefly in the stem, rhizome, and rootlets, and a strong emetic and cathartic: and *Convallamarin*, also a glucoside, bitter and amorphous, found chiefly in the flowers, and a valuable cardiac stimulant and diuretic. This statement is very important, as its bearing upon the relation between the preparation used and the result attained is at once evident. By far the more important of the two is the latter, clinical experience not having given the former any prominence as an emetic and cathartic better than those in ordinary use.

The preparation, then, that should be employed is an alcoholic tincture of the flowers, 4 ozs. of flowers to the pint of dilute alcohol, in doses of 20 to 30 m.; or the fluid extract of the flowers, that made by Parke, Davis & Co., of Detroit, being hitherto most reliable, given in doses of 5 drops three times a day up to 20 or 30 m. every four hours or more. Other preparations are fluid extract of the herb and fluid extract of the root, not likely to be of such service for the reason given above; pill of convallamarin $\frac{1}{2}$ gr., and tablet triturate convallamarin, $\frac{1}{50}$ gr.

Points of interest in its dosage are that it has no cumulative effect, and that smaller doses, of the size stated above, have vascular and cardiac sedative and diuretic effects quite equal to those of much larger doses, even half a fluid ounce at a time. It is to be noted, too, that idiosyncrasy is to be guarded against, small initial doses being employed.

Physiological experiment has shown, in both warm and cold-blooded animals, that the cardiac contractions are retarded, with an increase

in their energy and in blood pressure. In warm-blooded animals this retardation is followed by markedly accelerated contractions and still higher blood pressure, the heart finally being arrested in systole, as in digitalis poisoning, and the blood pressure falling.

This statement naturally leads to a comparison of convallaria and digitalis. As regards their diuretic effect, they are both cardiac diuretics, the advantage lying with convallaria in that it has no cumulative effect, and that diuresis, if established, lasts some days, four or five, without the continuance of the drug. When heroic doses are necessary, convallaria may be given more safely than digitalis. It has the great additional advantage of not causing gastric disturbance. That state of the renal epithelium which causes albuminuria hinders its diuretic action. As regards the stimulant effect of the two drugs on the heart-muscle, authorities such as Sée and Dujardin-Beaumetz give convallaria the first place, as it is not so dangerous in myotrophic changes in the heart, and acts as a powerful regulator of nervous function, both of the sympathetic and cerebro-spinal systems. Particularly in cardiac neuroses, such as palpitation, smoke's heart, the "irritable" heart of anæmia or hysteria, whether accompanied or not by organic change, it seems to be a most valuable therapeutic agent. Valvular lesions are notoriously accompanied by irritability in the patient, and a sense of comfort and *bien être* is secured in most cases very promptly and peacefully relieved.

Authorities are disagreed as to the value of convallaria over digitalis as a cardiac tonic in cases where the heart muscle is diseased; e.g., in convalescence from acute disease, such as typhoid. The rule against digitalis in such cases is not yet established against convallaria, and Sée claims efficacy for it. The latter authority, as a result of many experiments on both animals and man, has summarized as follows:

"First: Convallaria majalis constitutes one of the most important cardiac remedies which we possess.

"Second: . . . Convallaria produces on the heart, blood vessels, and respiratory organs effects constant and constantly favorable, to wit: Slowing of the heart beats, with often a restoration of the normal rhythm, and, on the

other hand, augmentation of the energy of the heart, also of the arterial pressure; in fine, the inspiratory force is increased and the *besoin de respirer* is less injurious, less painful.

"Third: The most powerful, constant, and useful effect is the abundant diuresis, which is, above all things, essential in the treatment of cardiac dropsies.

"Fourth: The therapeutic indications are summed up as follows:

"(a) In palpitation resulting from exhaustion of the pneumogastric nerves (cardiac paresis), the most frequent source of palpitations.

"(b) In simple cardiac arrhythmia, with or without hypertrophy, with or without lesions of the orifices or valves.

"(c) In mitral constriction, especially when it is accompanied by failure of compensation on the part of the left auricle and right ventricle; the contractile force augments visibly under the convallaria, as the sphygmograph testifies.

"(d) In mitral insufficiency, especially where there are pulmonary congestions, and when, as a consequence, there is dyspnœa, with or without nervous trouble of the respiratory apparatus.

"(e) In Corrigan's disease the peripheral arterial pulsations disappear, and respiration becomes markedly restored. In dilatation of the left ventricle without compensatory hypertrophy it restores energy to the heart, which tends to become more and more feeble and dilated.

"(f) In dilatations of the heart with or without hypertrophy, with or without fatty degeneration, with or without sclerosis of the muscular tissue, the indications for convallaria are clear.

"(g) In all cardiac affections indifferently, from the moment that watery infiltrations appear, the drug has an action evident, prompt, and certain.

"(h) In lesions with dyspnœa the effect is less marked. To combat cardiac dyspnœa, convallaria is inferior to morphine, and especially to iodine, but morphia suppresses the urine, and iodine is in every way preferable. The combination of iodide of potassium with convallaria in the treatment of cardiac asthma constitutes one of the most useful methods of treatment. Finally, in cardiopathies with dropsy, the convallaria surpasses all other remedies. One is often obliged to suspend the use

of digitalis on account of vomiting, digestive disturbances, cerebral excitation, the dilatation of the pupil which it so often produces after prolonged use. The final action of digitalis is exhaustion of the heart, increase with enfeeblement of the heart's pulsations, just the opposite effect from those we seek when we give the drug.

"Convallaria has no deleterious effects on the economy, and has no cumulative action."

Hospital Reports.

SEPARATION OF THE LOWER FEMORAL EPIPHYSIS.*

Under the care of A. Primrose, M.B., C.M. Edin., M.R.C.S. Eng., in the Hospital for Sick Children, Toronto.

Willie Macklin, æt. 13. At half-past seven o'clock on Thursday morning (Nov. 12th, 1891) he was trying to pass from one room to another by climbing out of one window and into another, the rooms being situated in the third storey of the house, 30 feet from the ground. He missed his footing and fell, falling on a driveway. His sister and mother went immediately to his assistance, and found him lying unconscious. He was carried into the house, and about half an hour after he became conscious. Dr. Primrose was sent for, and found the patient at 8.30 a.m., lying in bed, with the left leg flexed on the thigh, at an angle of 80°. The thigh was also flexed on the abdomen. There was perceptible swelling at the knee-joint. The boy complained of pain in the knee. There was a considerable amount of blood about the face. He had a cut in the lower lip $1\frac{1}{2}$ inches long, through the entire thickness of the lip, $\frac{3}{4}$ of an inch below the free margin of the lip. He had knocked out the left upper central incisor tooth. He had a small wound in the right ala of the nose. Dr. Primrose examined the injured limb and concluded that a fracture existed, but could not determine the exact site; there was undoubtedly some implication of the knee-joint in the injury; the swelling within the synovial sac occurred immediately after the injury; it probably was filled with blood and serum. A long splint was applied, the limb first of all having been straightened by traction at the ankle. The splint ex-

tended from the foot to the axilla, and was secured by a leg-bandage, a spika at the hip, and a wide roller around the chest. Four stitches were put in the wound in the lip.

Dr. Primrose advised that the child be sent to the Children's Hospital. This was done, and he was admitted at 11 a.m. On admission, the child was put under chloroform and examined. The femur was carefully examined, but no fracture discovered by direct manipulation of the bone. The leg was then grasped above the ankle by one hand, and the other hand applied over the condyles of the femur. It was found that very marked movement occurred laterally at the condyles, at a point apparently just below the adductor tubercle on the inner side, and at a corresponding point on the outer side. The movement (although not carried out extensively) was very perceptible, the lower fragment rocking from side to side on the upper, producing at the same time soft crepitus. The patella, on being pressed back firmly against the femur, and on being rubbed from side to side, gave a very perceptible crepitus, a roughness which was well marked. (This fact was noted at the boy's home. It was found that there was no pain on manipulating the patella alone, but on pressing it back against the femur pain was elicited, and the roughness spoken of noted.) The swelling at the joint was very great. On careful measurement being taken from anterior superior spine to the internal malleolus, there was found to exist scarcely half an inch of shortening in the fractured limb. The limb was placed in good position and a long splint from the axilla to the ankle applied with extension 6 lbs., the limb being retained in an extended position.

Dec. 9th, 1891. There has been some irregularity of the temperature since admission. There has been nothing special to note in his condition. The swelling in the knee has been very obstinate, but is slowly diminishing.

Dec. 12th, 1891 (four weeks after the injury). Dr. Primrose removed the splints and attempted passive movement at the knee-joint. A very small amount of flexion was possible, through an angle of, say, 8°. This was not accomplished without considerable pain to the patient, and the breaking down of adhesions was perceptible, some giving way with a distinct crack. Directions were given to have passive movement

*A case presented at the Toronto Medical Society.

carried on daily, increasing, from time to time, the amount of flexion.

Feb. 6th, 1892. Passive movement has been carried out regularly; for the past five weeks he has been out of bed, rolling about the ward in a wheel-chair; latterly he has been walking with the aid of a stick. The splint was left off Dec. 27th, 1891, and he has not worn any fixation apparatus since.

The measurements from anterior superior spine to internal malleolus were: Left, $31\frac{1}{2}$ inches; right, 32 inches. There was $\frac{1}{2}$ inch of shortening on the affected side. Extension at the knee-joint was normal, and he could flex the leg so that the leg formed with the thigh an angle of 50° , or, in other words, the amount of flexion was through an angle of 130° . He was told to continue passive movement, and to increase still further, if possible, the amount of flexion.

The patient was discharged.

Remarks by Dr. Primrose: Separation of the lower epiphysis of the femur is not of common occurrence. When it occurs from extreme violence it becomes an injury which, as a rule, results in very disastrous consequences, and it is probable that the injury seldom or never occurs in healthy subjects unless the violence be extreme.

The patient I show you fell a distance of thirty feet, and, as the result, fractured the femur at the lower epiphysial line. It seems remarkable that the deformity resulting was not greater, and that the injury to the knee-joint and the surrounding soft parts was not more severe. If, in fact, the present instance exemplified the usual results of such an injury, we would be very much misled by the accounts given by authorities on fractures; thus in Hamilton's treatise on fractures and dislocations, we have recorded a number of cases illustrating the different conditions found associated with separation of the lower femoral epiphysis. I may briefly refer to these:

Case 1.—A boy of 11 years. The shaft of the femur was driven behind the condyles. The limb was amputated.

Case 2.—Fracture caused by traction on the foot in the act of birth. Child born dead.

Case 3.—Boy, æt. 18. Caused by violent blow on lower part of femur. Impossible to reduce the fracture. Gangrene ensued. Limb amputated on 5th day.

Case 4.—Boy, æt. 11. Compound. Amputation performed on 13th day.

Case 5.—Compound. Amputation.

Case 6.—Boy, æt. 9. Compound. Amputation.

Case 7.—Boy, æt. 12. Compound. Recovery ensued, with shortening of $\frac{3}{4}$ of an inch and ankylosis of knee-joint.

Hamilton, therefore, does not report any case which terminated in as favorable a fashion as that which I now present to you. The points worthy of note concerning my patient are:

(1) The violence was great, and the injury produced was one which seldom occurs without extreme violence; nevertheless the injury produced was restricted chiefly to the seat of fracture in the bone, and the joint and surrounding soft parts escaped in a manner quite unusual.

(2) The ease with which the deformity was reduced.

(3) The complete restoration of the function of the joint, and the small amount of deformity of the limb (*i.e.*, $\frac{1}{2}$ inch of shortening).

CASE OF RENAL CALCULUS—NEPHROLITHOTOMY—RECOVERY.

Under the care of A. McPhedran, M.B., and I. H. Cameron, M.B., in Toronto General Hospital.

(REPORTED BY R. H. GOWLAND, M.B.)

Matthew B., æt. 24, teamster. Admitted into Toronto General Hospital, March 14th, 1892, under the care of Dr. McPhedran. At that time he complained chiefly of some failure of general health, of severe pain in the lumbar region, and he had a peculiar gait, walking quite lame and holding the right leg and thigh somewhat flexed.

Family History: Good

Past History: Has always been a strong, healthy fellow of regular and temperate habits. Had typhoid fever ten years ago, but otherwise perfectly well until about two years ago, when, on lifting heavily, he felt a violent pain in the back. At next micturition urine was markedly bloody and the hemorrhage continued, gradually diminishing for four days, when it again appeared normal. Patient stopped work for three weeks, but suffered at irregular intervals from severe pain, which began in the right

lumbar region and ran along the course of the ureter to the testicle of the same side. The testicle retracted during a paroxysm of pain. At the end of the above time he felt somewhat better, and took a position as street-car driver, working steadily for seven months. During this time he was quite free from pain, and, thinking himself well, he returned to his former occupation. About six weeks later, however, the pain returned, with the same characteristics, but without any hemorrhage, and he was forced to leave work for a short time. After a few days he started work again and continued till spring, when he had a similar attack. He worked on till October, when he received a severe shaking up by the upsetting of a load of wood. Since this time pains have been more frequent and severe, and he has not worked steadily. In April, while ploughing, he had a second hemorrhage, lasting about three days, and since that time he has done no work. Medicinal treatment was tried by several physicians, but gave no relief. The paroxysms were usually relieved by hot fomentations, but towards the last these were useless.

Present Condition: Has a healthy appearance, but says he is considerably weaker than he was a year ago. The gait is peculiar, resembling, in some respects, that seen in morbus coxæ, but all the movements of hip-joint are free and painless, and the characteristic signs of joint disease are absent.

Urinary System: No pain on micturition; frequency normal; on deep abdominal palpation over the right kidney some tenderness can be observed, but no dilatation of pelvis or ureter.

Examination of Urine:

Gross: Quantity, normal; color, ditto; reaction, slightly acid; specific gravity, 1030; slight flocculent precipitate on standing.

Chemical: Trace of albumen, due to the presence of pus.

Microscopic: Pus cells; ten to fifteen in a field; oxalate of lime crystals about same number; red blood corpuscles, a few.

Nervous System: Does not sleep well on account of pain. When lying on left side he has a dragging sensation, and when on right a feeling of soreness. He also complains of considerable frontal headache and dimness of vision.

Alimentary System: Tongue slightly coated and appetite only fair; otherwise normal. Rectal analysis showed the prostate and vesiculæ seminales normal.

Dr. McPhedran pointed out that the symptoms were very typical. The seat and direction of the pain, the retraction of the testicle, the hæmaturia and pyuria, without the presence of mucus, taken with the other characters, are very significant, and from the abundance of oxalate of lime crystals it is fair to judge that the calculus is composed of oxalate of lime; the severity of the pain would also indicate that. It must not be forgotten that the pain is not necessarily referred to the side on which the calculus is located.

The diagnosis of calculus of the right kidney seemed so clear that the patient was referred to Dr. I. H. Cameron for operation, and on March 26th Dr. Cameron, assisted by Dr. Primrose, made a lateral lumbar incision exposing the kidney. On palpation nothing abnormal could be felt. A needle was then introduced, and, after some search, the point came down on a substance giving a clear click and a firm feeling of resistance. A limited incision was made in the kidney substance over the position of the stone and forceps applied, but it was only with great difficulty that it could be dislodged. It was firmly imbedded in the kidney structure towards its upper extremity, and projected partly into the pelvis, the projecting part being covered with the mucous lining of the part. When removed it weighed sixty-two grains, had a distinct capsule which came away with it, and, as would be expected from the urinalysis, was composed of oxalate of lime.

Further examination revealed no more calculi. The wound was flushed with sterilized water at 110° F., a drainage tube inserted, and the wound closed by superficial sutures. A dressing of iodoform, with Keith's preparation (carbolic acid, 1 part; glycerine, 7 parts), and large pads of absorbent gauze were applied, and the patient sent to bed.

The shock of the operation was considerable, requiring free use of spiritus vini gallici and ½ grain of strychnia hypodermically. For two or three days urine discharged freely from the drainage tube, but from this time it rapidly diminished, and at the end of a week scarcely

any escaped. There continued for considerable time a purulent discharge. The absorbent pads were changed as soon as any moisture appeared (about every six hours at first). The urine passed per urethra contained blood and pus, showing that the ureter and pelvis were free.

The patient is now quite well, and since the operation has had no attack of the characteristic pain.

Correspondence.

Editor of THE CANADIAN PRACTITIONER :

Again I must beg of you to assist me in refuting statements made by Dr. Benson regarding my views on diphtheria (*CANADIAN PRACTITIONER*, Feb. 1st and May 2nd, 1892). In my first answer, printed in your esteemed journal March 16th, 1892, I plainly showed that the above mentioned gentleman had attacked "the disciples of the local-origin theory of diphtheria" for statements they never made, but which originated in the mind of Dr. Benson. Instead of taking warning through this reply, which was only intended to correct wrong statements regarding my views, and not for entering into a discussion which we then and there termed useless, Dr. Benson again tells your readers and myself that "Dr. Seibert's theory is that there is first an inflammation and secondly an exudation, so that the disease actually existed before the exudation appears by which the disease is recognized."

(1) Dr. Seibert never said this, no more than he would say that a wood fire could first burn without smoke, while in reality we have both fire and smoke within the same second.

(2) Dr. Seibert never had the audacity to advance any theory of his own regarding the pathology of diphtheria, but freely confesses that no amount of ink-wasting could induce him to think Dr. Benson, in Chatham, correct, and Klebs, Loeffler, Oertel, and Heubner all wrong.

(3) Dr. Seibert does not want to answer questions which can only be answered by a careful study of the wonderful work of the above-mentioned scientists; he simply asks not to be cited in the misleading and erroneous manner that Dr. Benson made use of.

(4) Dr. Seibert does not expect any one to

try his submembranous local treatment of pharyngeal diphtheria with the chlorine water syringe devised for that purpose who is not even acquainted with the rudimental portions of modern diphtheria pathology, for this treatment is based upon these facts, but he does deem it unscientific and unfair to attempt criticism without a fair trial.

G. SEIBERT, M.D.

New York, May 14th, 1892.

Editor of THE CANADIAN PRACTITIONER.

There having appeared in the *Templar* of March 31st last, a paper published in Hamilton, and the organ of the Royal Templars in Canada, a portrait and laudatory notice of myself, containing statements that are a gross violation of good taste and professional ethics, I am required by the Council of the Toronto Medical Society to repudiate, through the medical journals of Toronto, all connection with the parts of the article which deal with me in a professional capacity.

Having been one of the organizers of the order in this country, and having held office continuously for seven years, the editor of the paper had often asked permission to publish my portrait, accompanied by a short biographical sketch. This permission I had refused until a few months ago, when the editor urged it, reminding me that a similar course had been taken with nearly all the officers of the society. I unadvisedly consented, and did not take the precaution to see the biographical sketch before it was published. Having worked with and been known to the editor during those years, he was quite conversant with my history, and penned the exaggerated statement on his own responsibility.

In reply to a note from me complaining of the statements made, he sent me the following:

HAMILTON, April 28th, 1892.

DR. B. E. MCKENZIE, Toronto, Ont. :

DEAR SIR AND BROTHER,—Replying to yours of the 26th April, I desire to express my sincere sorrow if any blunder or mistake of mine has placed you in an unfavorable position before the profession. I am very sorry now that I did not consult you with regard to the brief sketch before it was published. Newspaper men easily fall into a hurried, reckless way of slashing off matter of this kind without any thought of the technical etiquette of any society or profession.

I make herewith the emphatic statement that you had no knowledge whatever of the character of text which accompanied your portrait, and that it was written without any consultation whatever with you. We took the liberty to deal with you as we did with other officers of our association, looking at the matter purely from a society standpoint, with the desire of presenting you to your brethren in the most favorable light.

Yours fraternally,

W. W. BUCHANAN.

No other person can regret so keenly as I do the publication of statements such as those referred to above.

Yours very truly,

B. E. MCKENZIE.

Toronto, May 19th, 1892.

Book Reviews.

A Text-book of the Practice of Medicine, for the use of students and practitioners. By R. C. M. Page, M.D., author of "A Chart of Physical Signs of Diseases of the Chest," etc., Professor of General Medicine and Diseases of the Chest in the New York Policlinic, etc. New York: Wm. Wood & Co., 1892.

As the title and preface of this addition to medical literature indicate, it is a students' manual, 557 pages, with index and blank pages added for memoranda. As a text-book in medicine it seems, for compendiousness and condensation, quite comparable to Walsham's text-book on surgery. The letterpress, binding, and paper are quite up to the publishers' usual good standard, but room has been rather too rigidly economized in the spacing, heading, and paragraphing. Beginners in inductive study need all the education in the line of systematizing their work that can be given by the careful use of bold-faced type or italics in the proper places. There is no attempt at this, and no numbering of heads and sub-heads in discussing the various points of information regarding each disease. In this matter the book seems deficient. The classification of diseases is modern, and the discussion of each brief, especially as regards pathology, fuller as regards treatment than most texts, even prescriptions being given in some cases. In some of these the author betrays rather slipshod Latinity; e.g., "Sig. ʒj ter die before or after meals," a hybrid combination of Latin and English that

is not the best proof of high scholarship. The book has, on the whole, more merit than such compendious treatises usually possess, is modern and scientific in pathology, diagnosis, and treatment, and should be of service to the student, but scarce'y to the practitioner.

A System of Practical Therapeutics. Edited by H. A. Hare, M.D., Prof. of Mat. Medica and Therapeutics in Jefferson Medical College, of Philadelphia, assisted by Walter Christie, M.D., formerly Instructor in Physical Diagnosis in the University of Pennsylvania. Vol. II. Philadelphia: Lea Brothers & Co., 1892.

The second volume of this system of therapeutics proves even more interesting and valuable than the first, dealing, as it does, with the treatment of those diseases most commonly met with in general practice. Syphilis, scarlet fever, typhoid, malaria, diphtheria, asthma, bronchitis, whooping cough, pneumonia, pleurisy, and empyema; diseases of the heart, blood vessels, and blood; diseases of the liver, gall bladder, stomach, are some of the subjects dealt with. The article on "Peritonitis and Appendicitis," by Roswell Park, and that on the "Diseases of the Rectum and Anus," by Charles B. Kelsey, will be found particularly useful.

The Pocket Pharmacy, with therapeutic index. A résumé of the clinical application of remedies, adapted to the pocket case, for the treatment of emergencies and acute diseases. By John Aulde, M.D. New York: D. Appleton & Co., 1892.

The author announces that "this small brochure is in the nature of a plea for small doses, to be administered in accordance with physiological deductions, and is the outgrowth of personal experience in general practice." Dr. Aulde is known chiefly for his roseate advocacy of arsenite of copper in the diarrhoeas of children. May his pocket pharmacy obtain a more enduring fame than his arsenite!

The Medical Annual and Practitioner's Index. A work of reference for medical practitioners. 1892. \$2. Bristol: J. Wright & Co. Toronto: J. A. Carveth & Co., 413 Parliament street.

This excellent annual makes its tenth appearance in a volume of increased size and value. Many physicians feel the need of some

work which shall keep them *au fait* with the advances in all the branches of medical science, yet they scarcely feel like taking so bulky a work as the yearly five volumes of Sajou's "Annual of the Medical Sciences." To such we can heartily recommend the "Medical Annual."

Pamphlets and Reprints.

Age of the Domestic Animals: Being a complete treatise on the dentition of the horse, ox, sheep, hog, and dog, and of the various other means of determining the age of these animals. By R. S. Huidekoper, M.D., Professor of Sanitary Medicine and Veterinary Jurisprudence, American Veterinary College, New York; late Dean of the Veterinary Department, University of Pennsylvania. Philadelphia and London: F. A. Davis, 1891.

Mme. Lachapelle, Midwife. By Hunter Robb, M.D., resident Gynecologist to the Johns Hopkins Hospital. Johns Hopkins Hospital Bulletin No. 18, 1891.

Action and Application of the Faradic Current in Gynecology. By A. H. Goelet, M.D. Reprinted from the *Times and Register*, Nov. 7th, 1891.

Intestinal Anastomosis and Suturing. By Robt. Abbé, M.D., Professor of Surgery to Post-Graduate School, of New York. Reprinted from *Medical Record*, April 2nd, 1892.

Cases of Gall Bladder Surgery. By Robert Abbé, M.D. Reprinted from *New York Medical Journal*, Jan. 30th, 1892.

Conservative Treatment of Inflammatory Diseases of the Uterine Appendages and Sequelæ by Electricity. By A. H. Goelet, M.D. Reprinted from *Annals of Gynecology*, Boston, Feb., 1890.

Personal.

DR. THIRD, of the Toronto General Hospital House Staff, has been very seriously ill with facial erysipelas. Grave fears were entertained for his recovery, but he is now apparently mending. His many friends join in wishing him a safe and speedy convalescence.

Therapeutic Notes.

THE BEST DISINFECTANTS.—The Health Department of the city of New York has contributed much towards a proper understanding of the uses of disinfectants, and the following summary of the results recently determined by this department, as showing the relative value of the below-named germicidal chemicals, may be relied upon as accurate and conclusive. The germ-destroying power of the several agents was tested on the ordinary bacteria of putrefaction. They ranked in effectiveness in the following order:

Corrosive sublimate, 64 grains to the gallon.
Carbolic acid, 5 per cent. solution.
Bromine, 1 lb. to 200 gallons.
Permanganate of potash, 17¾ ounces to 200 gallons.
Chloride of lime, 4 ounces to the gallon.
Sulphate of iron, 1½ lbs. to the gallon.
Sulphate of zinc, 4 ounces to the gallon.
Common salt, 2 ounces to the gallon.—

Thomas J. Keenan in *American Druggist*.—*Doctors' Weekly*.

FETID PERSPIRING FEET.—Dr. Bordet gives the following formula:

R.—French chalk 40 parts
Subnitrate of bismuth 45 "
Permanganate of potassium 13 "
Salicylate of sodium 2 "

M. This powder should be dusted daily into the stockings. The feet should be washed every morning and evening, and after washing rubbed with alcohol.

The method of treatment recommended by Unna is as follows:

R.—Ichthyol 5 parts
Turpentine 5 "
Zinc ointment 10 "

—*Doctors' Weekly*.

TREATMENT OF CYSTITIS BY OXALIC ACID.—Dr. Renaud (*Le Bulletin Médical*, No. 12, 1892) has used oxalic acid for a long time in the treatment of cystitis with satisfactory results. He employs the following formula:

R.—Oxalic acid gr. xv.
Syrup of orange peel fl. ʒj.
Distilled water fl. ʒiv.

A soup-spoonful every two days.—*Lancet Clinic*.

CHLORAL IN THE TREATMENT OF FURUNCLES.—A tampon saturated with the following mixture is said to be useful in the treatment of this affection :

R.—Chloral 10 grammes
Aqua.
Glycerine, aa. 20 grammes
— *Journ. of Cut. and Genito-Urinary Diseases.*

FOR HEMORRHOIDS.—

R.—Atropinæ sulphat gr. iv.
Acid. tannic gr. vj.
Morphinæ sulphat gr. vj.
Cocainæ hydrochlorat ʒ ss.
Vaselin ʒj.

M. et ft. ung.

Sig.—Apply a small quantity to the hemorrhoid after each stool.—*Rev. de Ther. Gen.—Doctors' Weekly.*

GLYCERIN FOR BURNS.—“According to Dr. Grigorescu, of Bucharest, glycerin is a perfect and lasting analgesic in the case of burns. Applied at once to the burned surface, it occasions at the instant of application a slight feeling of burning, followed by complete relief from pain. Where the wound is large, it should be kept constantly moist with glycerin. By means of this application inflammation is almost entirely avoided, and sloughing takes place gradually, leaving a much less marked scar than is the case with ordinary dressings.”—*Druggists' Circular and Chemical Gazette.*

Miscellaneous.

THE NEW REGIUS PROFESSOR OF PHYSIC IN THE UNIVERSITY OF CAMBRIDGE.—The appointment of Dr. Clifford Allbutt as Regius Professor in the University of Cambridge (in succession to the late Sir George Paget) will certainly come as a surprise to many. Dr. Allbutt is a distinguished physician and a clinical teacher of no small repute. He is a graduate—in both Arts and Medicine—of the university in which he now becomes professor, and has also been an examiner in Medicine. A few years ago, however, Dr. Allbutt relinquished all his appointments and gave up an extensive consulting practice at Leeds in order to accept a Commissionership in Lunacy. This office precluded him from private practice, and he fixed his abode in the metropolis. Dr. Allbutt now en-

gages for a second time in a career in which he has already attained eminence. He is an original and outspoken thinker, and gave offence to many by his vigorous onslaught on some forms of specialism in the Goulstonian Lectures delivered before the College of Physicians in 1884. A man of very wide views himself, Dr. Allbutt may be trusted to worthily fill the post Sir George Paget adorned for so many years, though he is in many respects a marked contrast to his distinguished predecessor.—*N. Y. Medical Record.*

DR. JAMES STARTIN writes (*Brit. Med. Jour.*): “My attention has lately been drawn to some obstinate cases of local eczema occurring on the foreheads of men, especially young men; and, on looking for a probable cause, I found that the ordinary leather lining of hats—that is, the part that comes next to the skin on foreheads more particularly in the high hat—is whitened and glazed with arsenic and other irritating substances. Many times I have been puzzled to know why the ordinary remedies prescribed for this peculiar cutaneous eruption, simulating eczema in every respect, would not benefit the disease.”—*Maryland Medical Journal.*

MEDICAL COUNCIL OF BRITISH COLUMBIA.—At the medical examinations held on 3rd, 4th, and 5th ult., there were six successful candidates, namely: Dr. Ferguson, Vancouver; Dr. Sproule, Victoria; Dr. LaBan, Nelson; Dr. Gordon, Vancouver; Dr. Duncan, Victoria; and Dr. Lambert, Yale. One candidate was rejected. The following are the officers elected for the year: President, Dr. W. A. DeWolf Smith, New Westminster; Vice-President, Dr. J. M. Lefevre, Vancouver; Registrar and Secretary, Dr. G. L. Milne, Victoria. The examinations are held three times a year—September, January, and May.

THE number of persons to whom anæsthetics were administered in the metropolitan hospitals of Sydney during the year 1891 was 1986. There were two deaths, one at the Moorcliff Eye Branch under chloroform, and the other at the Prince Albert Hospital under a mixture of chloroform and ether.

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