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THE CANADA LANCET.

A MONTHLY JOURNAL OF
MEDICAL AND SURGICAL SCIENCE,
CRITICISM AND NEWS.

Original Communications.

INTESTINAL PERFORATION IN STRANGULATED HERNIA.*

BY W. B. DE GARMO, M.D.,

Professor of Special Surgery in the New York Post-Graduate Medical School and Hospital.

While the title of this paper restricts our discussion to only one point of a very extensive subject, even this one point can be discussed only in a general way before a scientific body whose programme is crowded with papers, many of which may be of more interest to the general practitioner. Certainly few can be of more importance, as every medical man who has been confronted with a damaged intestine, always unexpectedly, will freely admit. Then is the moment when the patient's life hangs upon the merest thread, and then the moment when the thread shall be severed or judiciously husbanded by the medical attendant, and the correctness of his judgment will depend largely upon the thought he has previously given to the subject. There is no time to look up this authority or that, nor to judge between the flowery and convincing statements of the one, and the equally positive statements, directly contrary, of the other.

These then are the questions of vital importance for the consideration of a representative medical body, that a free comparison of views may be had, and that the members may go home with firmer convictions as to what should or should not be done when these grave emergencies arise. It is true that these conclusions may be in direct opposition to the reader of the paper, and still they are very liable to be approximately safe if they represent the judgment of a majority of those present who are qualified by experience or study to enter into the discussion. Another point that

presents itself strongly to the mind of the speaker is, that it is far better to limit discussion, to a great extent at least, to the more simple methods of procedure that can be carried out by the average practitioner, rather than devote the time to those intricate operations that cannot be executed by any but the most experienced abdominal surgeon. If all cases of strangulated hernia received the prompt surgical attention that they are entitled to, then the discussion of the subject embraced in the title of this paper would be entirely unnecessary. Unfortunately, this much-desired state of affairs cannot be realized as long as there remain uncertainties in diagnosis, popular prejudices against operations, or—even worse—hesitation on the part of the medical attendant as to the proper course to pursue in order to protect his patient against so disastrous an accident.

The strangulation which leads to the destructive process under consideration may come about gradually, or be immediate, according to the circumstances attending the case. In the first instance, a loop of bowel lying through the canal is moderately constricted, commonly at the external ring. This constriction retards the return flow of venous blood. Progressive engorgement takes place until the blockade becomes so great as to shut off not only the return flow, but also the vessels of supply. Not only is the constricting band becoming tighter and tighter, but frequently, by the formation of gas in the interior of the bowel, the pressure is increased. This pressure from within the gut frequently has a far greater influence upon subsequent events than is generally recognized.

Immediate strangulation usually occurs as the result of forcing down suddenly a new loop of intestine or piece of omentum by the side of a protrusion already present, thereby blocking the canal to such an extent as to shut off at once all blood supply. In such cases the onset of the trouble is usually sudden and violent.

I feel that we should also give serious consideration to a third form of strangulation which is brought about in quite a different manner, and the true character of which is seldom recognized. It occurs in old irreducible hernias, and usually those of large size, where one or more long loops of bowel form the protruding mass. The bowel becomes adherent and otherwise crippled by bands

* Read before the N. Y. State Med. Soc., Feb. 7, 1894.

traversing the sac. Eventually it loses its natural peristaltic movement and lies in the sac as a passive curved tube moderately constricted at its passage through the muscular wall of the abdomen; through this tube the intestinal contents must be forced by the normal action of the bowel within the abdominal cavity. The first symptom of serious trouble in these cases is that of obstinate and gradually increasing constipation, terminating in intestinal obstruction with all of its accompanying symptoms. It is usually in the last-named state that the physician sees it for the first time. He is very likely to recognize the site of the hernia as the point of obstruction. It is only in cases of extreme delay that perforation occurs in this class. In fact, the operator may find a condition of extreme engorgement only, and is surprised after doing a careful operation that the patient eventually dies. The cause of death is usually intestinal paralysis, both from the crippled condition of the bowel in its long residence outside of the body, and from the moderate degree of pressure which has been constantly across the neck of the loop. Attention is especially drawn to this group because of their essentially fatal character. They are, in many instances, fatal where the bowel is not perforated, and they are almost necessarily so if ulceration or gangrene occurs. Doubtless, if we could recognize these with certainty, and where it could be carried out with any degree of skill, resection of the entire loop would be in the interest of the patient.

It seems to the speaker important to recognize the three modes of strangulation briefly referred to, as having a direct bearing upon our prognosis as well as treatment of the damaged bowel, and that we should carefully weigh all of the circumstances attending the onset of the trouble, rather than be governed wholly by the appearance of the bowel as found upon operation.

As an illustration of this point, two cases within personal experience may be cited, one in a woman of eighty years with acute strangulation for only six hours, where the bowel was so badly discolored as to make the policy of its return at first doubtful. She recovered promptly after methods of treatment mentioned later. Another woman of only forty-five with obscure symptoms of intestinal obstruction for ten days, was found to have a loop of bowel moderately congested and mechan-

ically obstructed by sharp flexion upon itself, having slipped through an opening in adherent omentum. The bowel had no appearance of serious damage, and still the woman died ten days later from returning obstruction due to paralysis of the loop which had been incarcerated.

There is no arbitrary classification that will apply to these cases, but for convenience we may speak of them as cases where upon opening the sac we find one of the following conditions:—

1. Congestion.
2. Inflammation.
3. Laceration and perforation.
4. Gangrene.

Congestion.—In cutting down upon strangulated bowel we may find it œdematous, its coats thereby thickened, and of a bluish or deep red, or even dark brown color. The first question for consideration after cutting the stricture which has caused the trouble, is whether or not the bowel may be returned to the abdomen, without risk of subsequent perforation. If the strangulation is of recent origin, and no great violence has been resorted to in attempts at manual reduction, then, though the appearance of the bowel is rather suspicious, we can usually so far improve its condition as to make its return perfectly safe.

From a fairly large personal experience in its use I am a strong advocate of the persistent application of hot water in the restoration of doubtful bowel. First of all be sure that the constriction has been freely divided, and the bowel has been drawn down far enough, so that the portion which has been under pressure can be inspected. Accidents of perforation after the return of the bowel are largely due, the speaker believes, to lack of this precaution. Sterilized gauze (not bi-chloride) or a towel wrung out of water that has been boiled, and at a temperature that can be borne without discomfort to the hands, should be laid upon the parts and changed as often as necessary to retain an elevated temperature until a return toward normal color indicates improved circulation. I have seen some striking illustrations of the efficacy of this method, and believe that the time spent in carrying it out does not add to the risk of the operation; on the contrary, that application of heat to the bowel tends to diminish the amount of shock frequently attendant upon strangulated hernia.

It is well to remember that dark spots on the intestine may be due to small blood clots between its coats, or there may be clotted blood within the interior of the bowel, although the latter is believed to occur rarely, except in children. It has been an experience frequently repeated with the speaker, in infants who had suffered temporary strangulation, who, after reduction by manipulation, have passed blood with the next two or three stools.

Inflammation of bowel and sac will usually be found associated with exudation of lymph and with considerable fluid within the interior of the sac. Great care is necessary in separating these adhesions that the bowel is not lacerated, and at times it will be found advisable to cut out a portion of the sac and return with the gut, after due precautions about thorough cleansing, and the use of the hot water to aid in restoring the bowel to its normal condition.

Here, again, must be repeated the caution about drawing the bowel down to a healthy portion and seeing that all adhesions are broken up before it is returned to the abdomen. Ulceration and perforation are also more liable to occur at the point of stricture than in the body of the loop.

The loop is usually found distended with gas, or fluid, or both, and this brings up the question of tapping, in order to secure easier reduction. I can hardly think that any surgeon of experience would, at the present day, do otherwise than advise against this procedure, even with the finest hypodermic needle. It has been found that making a puncture point in an already partially paralyzed intestine is quite a different thing from treating a healthy bowel in a like manner, and that it is inviting a breaking down of tissue at this point after the bowel is returned to its natural cavity. For the same reasons I look upon all forms of aspiration in attempted reduction of strangulated bowel with the greatest disfavor.

Tension upon the loop will be relieved when the stricture at its neck and surrounding adhesions are freely divided.

Laceration and perforation.—These two words have reference to two quite different accidents. Laceration may, and frequently does, occur as the result of violent taxis, or in separating adhesions during the operation in otherwise fairly healthy bowels; while perforation in this sense implies a solution of continuity by a destructive process,

and that this degeneration of tissue extends beyond the point visible to the eye. To lose sight of this latter fact is almost certain to result in disaster to the patient. In either case, we usually have to deal with a septic condition, due to extravasation of the contents of the bowel, as well as a more or less localized peritonitis, and it is advisable to wash out all foreign matter as carefully as possible with a weak bichloride solution, followed by boiled water. If the opening into the bowel is of large size, it is well to close the bowel on either side by means of temporary clamps. Clamps designed for the purpose are not a necessity. A piece of iodoform gauze, or a flat rubber band surrounding the bowel and held by forceps, will answer every purpose. These precautions having been attended to, release the bowel at its point of constriction, both that its damage here may be estimated, and that normal circulation may be as quickly re-established as possible. Every care must be taken to prevent entrance of septic matter into the peritoneal cavity and surrounding tissues.

In closing rents in the intestinal canal, as in doing any work upon the viscera, there are a few points always to be borne in mind. 1st. That in bringing surfaces together where their union is intended, it must always be serous membrane. 2nd. It matters less what form of stitch this is accomplished by than that they are brought accurately together, with their surfaces in perfect apposition. 3rd. Moderate scraping of the surfaces to be brought together to secure their earlier and more perfect agglutination (a point made prominent by Dr. Dawbarn). 4th. The absolute cleanliness of the part after work is done upon it before returning to abdominal cavity.

Senn (*Journal Am Med. Ass'n, Aug. 12, '93*) has called attention to the advisability of having the line of sutures run transversely to the long axis of the bowel, when possible, so as not to encroach so much upon its lumen. Linear lacerations must be closed, however, according to the direction in which they run, and this can usually be done with no serious impairment of the size of the tube. In most of this work, the Lembert suture, either interrupted or continuous (Dupuytren) will be found best; applied with a small round needle, and the material preferably of silk.

Perforation from degenerative process is so closely allied to gangrene that the greatest caution

is necessary in dealing with it. The bowel may be friable for some distance from the ulcerated spot, and if sutures are placed in these structures they are quite likely to yield after the return of the intestine to the abdomen. Small spots may be turned into the lumen of the bowel and closed with the Lembert suture, as in the case of lacerations, but in the larger ones, or where the whole loop is under suspicion, the question becomes a very serious one. We have then to select between one of three methods: 1. Artificial anus. 2. Fæcal fistula. 3. Resection.

If we accept the conclusions drawn from the tables of Zeidler, Frank, Grant and others as final, we should resort to immediate resection in all cases where the intestine is seriously damaged, but the average practitioner is slow to adopt so radical a measure.

Owing to the eventually fatal character of artificial anus, aside from its disgusting features, many English surgeons favor the deliberate establishment of a fæcal fistula. Bennett strongly recommends (*Wm. H. Bennett, Clinical Lectures on Abdominal Hernia, 108*), where the damage is not too extensive, the returning of the bowel to the abdomen, and placing a drainage tube of large calibre through the canal in contact with it, thus establishing a fæcal fistula. His experience in some apparently desperate and hopeless cases appears to justify the measure. I can scarcely bring myself to look upon it as good surgery, and should prefer to keep bowel already perforated or of uncertain character, outside the abdomen, if, for any reason, it was not deemed desirable to make an immediate resection. It is true that bowel left protruding through the abdominal wall is not as favorably placed for prompt recovery as when in its natural cavity, but it is certainly much less liable to cause general septic peritonitis in this position, and can be very favorably placed if freed from all constrictions and suitably protected by antiseptic dressings.

If resection is advisable, what method can the average practitioner, with little experience in abdominal surgery, with limited resources, with few instruments, and sometimes no assistance, use. These cases cannot be sent to the expert, nor can the expert, in many instances, be brought to them. Resection is certainly brought to the extreme of simplicity by the use of the Murphy button, now

so well known as to only need mention here. (*New York Medical Record, Dec. 10, 1892.*) It is only just to admit that although there are several very strong theoretical objections, it has had, perhaps, a better practical record up to this time than any other one method. Certainly, one of its greatest faults for use in the cases under consideration, is that it is quite liable *not* to be at hand when needed the most. I feel that we have one other method of resection which is fully as effectual, almost as easily done, and requiring only knife, scissors, and a needle and thread that could be found in any house, for its performance. I refer to the method of Maunsell, of New Zealand (*Am. Journal of Medical Science, March, 1892*), by which the bowel is joined end to end with serous surfaces in contact, all of its coats held firmly together with the stitches mostly inside the bowel. The damaged bowel having been cut away far enough back to insure healthy tissue, the ends are brought together by two temporary sutures, the first being at the mesentery and the second at the opposite or convex side of the bowel. The ends of these sutures are left long, and are tucked through a longitudinal slit previously made in one end of the bowel back about one inch and a half from its cut end. By traction upon these threads which form the two sutures, and which pass out of the slit in the bowel, one end is inverted, turned mucous side out, and the other end is invaginated into it, thus presenting both cut ends at the temporary slit with their serous surfaces in opposition. Traction upon the threads by an assistant will bring them in convenient position for stitching. This should be done with a long, slender, round needle armed with silk. The needle should pass through both walls of the two cut ends of intestine, cross its lumen, and transfix both walls on the opposite side. The thread can then be caught at the point crossing the lumen of the bowel, drawn out to a sufficient length and cut, thus forming two stitches with one passage of the needle. In this manner, the time required to stitch the ends together is reduced nearly, if not quite, one-half. Maunsell directs that the united edges of the bowel be painted with Wolfier's mixtures and dusted with iodoform, but while this may be advisable, it is shown that it is not a necessity by the very interesting case reported by Dr. Wiggin in the *New York Medical*

Journal, January 20, 1894. The invaginated bowel is now drawn out of the temporary slit and the latter closed.

NEURASTHENIA.

BY PROF. G. RAUZIER, OF MONTPELIER.

Translated from the French, by D. Campbell Meyers, M.D., Toronto.

(Continued from *May No.*)

The invasion of the psychic sphere, the functional depression of a great number of organs, without corresponding material lesions, the neurotic nature of the disease, will furnish the principal indications of treatment. The general treatment of neurasthenia comprises three indications :

1. *To combat the cause of the disease.*
2. *To treat the neurasthenic source.*
3. *To pursue the predominant localizations.*

(1) To carry out the first indication it will be necessary to commence (and this is not always an easy task) to unravel by tact and perseverance the cause of the illness. It will be necessary to study the family circle, to penetrate its desiderata, to study the heredity, to take full account of semi-confessions, of half whispered avowals escaping during a moment of indecision, and to be able to define a course of casual treatment ; without which all intervention directly opposed to the illness will remain a dead letter. It is in this pathogenic treatment, in this distraction of the patient from the pre-occupations which possess him, that the actions of the doctor will be particularly delicate ; very often he should perform extra-medical work in the family, combat a system of defective education, modify a tense situation, to free the patient from a vicious habit, compel the persons surrounding (often unsympathetic or badly disposed) to participate in the cure. It is necessary, in a word, to detach the patient by all possible means from the pernicious influences (over-pressure, pre-occupations, excesses) which have aided the predisposition. It is by the same methods that one may realize a prophylaxis of the neurosis in any subject whose personal or hereditary tendency would make him liable to neurasthenia.

(2) The neurasthenic *foundation* is, above all, amenable to a severe *hygiene* and *moral treatment*.

It is most important that the doctor should assume authority over his patient and persuade him that he is not afflicted with any organic lesion, therefore there is nothing opposed to a radical cure. Such persuasion is not difficult to obtain, for the neurasthenic only asks to be reassured, but it is still necessary to try to maintain it. An attitude firm and at the same time kindly, a patient and sympathetic hearing of some of the troubles so varied, in whose description the imagination of the patient is never in default, a minute examination of all the organs will aid in obtaining the confidence of the patient, in acquiring his adhesion and collaboration to the treatment. Once in possession of the patient, in order to combat the psychical asthenia, it will be necessary to impose a line of conduct upon him, to outline a means by which he may maintain his wavering will with firmness, to measure and increase progressively his portion of responsibility, and in a word, to force him little by little to occupy himself and to wish.

A similar *hygienic* treatment would not be applicable to all forms. To cerebral neurasthenics one would advise exercise, walking, without fearing even a certain degree of physical fatigue ; to spinal neurasthenics, on the contrary, quiet would be found advantageous. In all cases, distraction, travels, residence in the country, a winter's sojourn in a temperate climate would be useful.

Hydrotherapy is above all *the* medical treatment of neurosis. Administered in a stimulating form (douches, sea baths) in exclusively depressive states, in soothing form (lotions, frictions, wet pack, cold immersions, long baths). Among excitable neurasthenics, it will give the best results if its use is persevered in. There should be added, in summer, a stay at one of the following thermal stations : Néres, Luxeuile, Royat, St. Sauveur, Lamalon, Ragatz, Evian, Bigorre, or in a special hydrotherapeutic institution.

Electricity has been utilized under its different forms. They have successively extolled Franklinization (Vigouroux), the electric stool, electric baths. In cases of localized manifestations, they have found the electric breeze, the spark and electric friction beneficial. Beard and Rockwell

have advised Faradization and general galvanism in certain symptoms, headache especially.

Prof. Grasset, in speaking of isolation in these cases, says: The patient should be separated from his family surroundings and be isolated in an institution where he will be under the continuous and absolute care of a resident doctor. Hydrotherapy is only one of the means to be employed later with some neurasthenics, not at all with others.

The *medicinal treatment* of neurasthenia comprises above all *tonic* agents: iron, quinine, kola, cocoa, cod liver-oil, as well as calmatives to the nervous system; bromide of soda, valerian of ammonia, etc.

Three great methods emanating from parallel theoretical conceptions, and all three utilizing the hypodermic method, have lately been proposed, and are regarded favorably by practitioners, they are *injections of testicular juice, injections of cerebral substance, and injections of artificial serum.*

Brown Sequard has been the great promoter of this general method of injections of organic substances in the treatment of nervous diseases. He sets out with the idea "that a sort of essence of virility can be discovered in the animal tissues, capable of producing, in extremely small doses, as much good effect as the toxic and morbid ptomaines (can) evil." Applications of this theory have also been made in tabes, Basedow's disease, myxœdema, etc.

Brown Sequard has proposed injections of testicular juice in the treatment of neurasthenia. Crocq, of Brussels, and several other authors, have utilized the tonic properties of phosphate of soda. This question is of such great theoretical and practical interest, and again its solution is at the present time so much discussed, that we limit ourselves to pointing out these methods without discussing their developments, which would lead us much too far.

Again, the *treatment of predominating symptoms* should not be neglected, ordinary treatment, and which has nothing especially common with neurasthenia.

In cases of insomnia, one administers chloral, sulphonal, extract of cannabis, bromidia. Charcot has found in this symptom an application of his vibratory method.

Gastro-intestinal troubles will be amenable to

habitual treatment of dyspepsia in its different forms. If dilatation is accompanied by hyperchlorhydria, stimulants of the gastric secretions should be administered (nux vomica, bicarbonate of soda, hot Vichy water), at the same time combating fermentations (washing out the stomach); one should obtain antiseptics of the digestive canal (benzo-naphthol) and avoid constipation by the daily use of laxatives, mild and frequently changed (cascara, podophyllin, belladonna, oily laxatives, linseed, alkali powders). In the case of hyperchlorhydria, large doses of alkalies should be given, etc.

Neurasthenic angor is above all amenable to antispasmodics and sedatives; it does not contraindicate in any way the use of hydrotherapy. In the treatment of the different topalgias, glosodynia, coccydynia, mammary algia, etc. Blocq has advised the provocation, at the level of the place where the pain is felt, of a painful and relatively durable sensation, being of the opinion that pain artificially created, superposing itself on the spontaneous subjective pain will substitute itself for it, and that, thanks to that temporary mobilization, the latter will disappear. One could use cauteries and blisters, the electric brush and powdered chloride of methyl, etc.

We will only mention to condemn the different surgical experiments (ablation of the uterus or its appendages) performed with a view of overcoming certain *neurasthenic localizations*. Surgical intervention is only justifiable when there is a manifest and truly palpable lesion, whose persistence seems to play a part in the evolution of the neurosis.

In terminating this study it seems necessary to guard against a tendency too common among those who are called upon to treat neurasthenia, the abuse and complexity of therapeutic means. The diversity of neurotic symptoms, tends naturally in short to multiply medications, and that very often to the great detriment of the patient. One should constantly guard against such an excess, and avoid above everything connecting *therapeutic overpressure* with the noxious circumstances which maintain the disease.

(The end.)

BE sure you read the advertisements for pointers.

REPORT OF A CASE OF VAGINAL HYS- TERECTOMY FOR CANCER OF THE UTERUS.

BY J. ALGERNON TEMPLE, M.D., M.R.C.S.E., TORONTO.

Mrs. V. was admitted under my care as a private patient in the Toronto General Hospital, suffering from cancer of the uterus, with the following history:—In appearance she is a healthy woman, clear, bright complexion; aged 38, with a good family history, having never heard of any relative on either side, having cancer. Married eleven years, five children, youngest one fourteen months old. For the past two years has had more or less bearing down pain in the pelvis, and backache, otherwise healthy.

Three months ago she noticed a thin, watery discharge from the vagina, and for the past six weeks a bloody discharge, more or less offensive; has not lost flesh during the past three months. Her family physician on examination detected cancer of the cervix; and on consultation with him, I found a distinct localized cancerous deposit on the posterior lip; she had also an extensive bilateral cervical laceration, the uterus itself was quite movable, the vaginal walls not at all involved, and so far as I could ascertain no pelvic glands enlarged. I recommended hysterectomy, as seemingly the best operation for her to submit to. I firmly believe when the vagina itself is involved even to a slight extent, that hysterectomy offers no better chance to the patient than simply curretting and the use of the cautery or some caustic application.

On the 17th of April, the patient having been put under chloroform, I removed the whole uterine body and the appendages through the vagina, using forceps to clamp off the broad ligament, which method, in my experience, is vastly superior to the ligature. The vagina was lightly packed with iodoform gauze and patient put back to bed, the whole operation being completed within half an hour, and the patient losing but a very small quantity of blood. The forceps were removed in 36 hours, as also the tampon, which was not replaced again; within three weeks the patient was up and walking about, her recovery was rapid, and not uneventful. Complete removal of the uterus and appendages I consider should be performed in all suitable cases, and by this condition

I mean, no enlarged pelvic glands, no vaginal involvement, and the uterus not in the least fixed. Comparing this operation with the high amputation of the cervix, I believe it to be better.

1st. I think it gives the patient the best chance against recurrence.

2nd. It can be as quickly, if not more quickly performed.

3rd. It is much less bloody.

4th. The mortality is no higher in my personal experience.

This is the sixth case of vaginal hysterectomy I have performed without any death, so far as the operation is concerned. It is impossible yet to say what may be the ultimate result so far as recurrence is concerned. I would urge the early performance of this operation in this most dreaded disease, when even the case is seen early in its course.

Selected Articles.

ON THE TREATMENT OF SOME FORMS OF STONE IN THE BLADDER BY PERINEAL LITHOTRITY, WITH A DESCRIPTION OF THE INSTRUMENTS USED.

I have recently completed a record of over 400 operations for stone in the male bladder. These figures include instances of almost every recognized method of removing a calculus from this position, and though lithotrity, as I saw practiced by my late friend, Professor Bigelow, of Boston, under the name of litholapaxy, largely predominates, lateral, median and supra-pubic lithotomy, in their various modifications, have from time to time been utilized.

The greater number of persons thus operated upon were male adults up to 82 years of age, though these figures include 56 male children, who for the most part were treated by lateral lithotomy. As showing the safety with which the lateral operation can be practiced in these young subjects, I may mention that only one death, or failure to recover completely, occurred, and this was due to chronic pyelitis some weeks after the operation.

The stones removed by me in the course of these 400 operations include almost every variety in known chemical composition, though the hard urates and oxalates were the more frequent. One of the largest specimens of cystic calculus, weighing 1050 grains, now in the Museum of the Royal College of Surgeons, was successfully removed by lateral lithotomy. Medium sized stones, from

half an ounce to half a drachm in weight, were by far the most common, though some larger specimens, up to four ounces, occasionally presented.

These points are referred to incidentally for the purpose of showing that my practice has not been limited to one method of treatment, but has been varied to meet the different conditions under which stone in the bladder has come under my notice.

It may possibly be urged by some, considering the progress lithotripsy has made during the present half century, that, save in instances where the stone is of such dimensions as to be beyond the capacity of any lithotrite, no other operation for its removal is now advisable. Such a view might be accepted if lithotripsy, pure and simple, were always the entire success immediately and permanently we could desire. Mr. Cadge has pointed out in his Hunterian Lectures before the Royal College of Surgeons (1886) that the number of recurrences after the crushing operation, even in the hands of some of its warmest and most competent advocates, is such as to considerably detract from its completeness.

As in the case of other surgeons engaged in work of this kind I may state in general terms that my mortality has been a gradually decreasing one. Taking my last one hundred cases of stone operated upon by the various methods referred to, and excluding children and males under puberty, my number of deaths following crushing and nine cutting operations did not exceed five per cent. These cases, no doubt, at the present moment represent the best period of my work, and may be regarded as an outcome of the great advances that have been made in the operative treatment of stone in its various directions by Bigelow, Thompson, Cadge, Guyon, Keegan and Freyer, to each of whom we are indebted for something distinctive, in either the method or the application of treatment.

Fully recognizing the work of these distinguished surgeons, I am at the same time disposed to give some prominence to three circumstances which have contributed in no small measure to the results I have arrived at: (1) To the earlier diagnosis of stone which now prevails, and the application of treatment before the calculus has attained any considerable dimensions; (2) To the detection of a stone in the bladder with the sound, being concurrent with its removal; and (3) To a more extended experience in selecting the most appropriate, and therefore safest operation.

The object of this paper, however, is to briefly describe a method of operating which has been found particularly applicable to some exceptional cases, and where the results obtained from it contributed materially to the small mortality of a series of operations which embraces both lithotomy as well as lithotripsy.

It is not necessary for me to enter upon the history of perineal lithotripsy, and to trace the various modifications which have from time to time been described. The proceeding has been referred to by Dr. Gouley, of New York, in the following words: "The name of perineal lithotripsy was given in 1862, by Professor Dolbeau, of Paris, to an operation completed in one sitting by which the membranous portion of the urethra is opened, the prostate and neck of the bladder dilated, instead of being cut, and a large stone crushed, and the fragments immediately evacuated."

It was with this definition before me that I entered upon the study and practical application of the principles of this operation. I published my first communication on perineal lithotripsy some years ago, and I have practiced it in fourteen instances in male adults. In every example the operation was successful, recovery being rapid and complete, and I am not aware that recurrence of stone has in any one of these cases followed.

The chief features in connection with the operation I am about to describe are: (1) The mode of obtaining access to the interior of the bladder from the perineum; and (2) The mechanism connected with crushing and evacuating the stone.

From a number of experiments I made on the dead subject as well as from the performance of median cystotomy on the living for various purposes, it seemed unnecessary to do more than to make an opening from the perineum into the membranous urethra at the apex of the prostate, on a grooved staff passed along the urethra, sufficient to admit the introduction of Wheelhouse's small tapering gorget, and subsequently the index finger into the bladder, as for digital exploration, or, as is done in the *houtonniere* or *Cock's* operation—more than this is not necessary. In Dolbeau's operation direct access to the bladder was obtained by this route, aided by the use of an expanding instrument by means of which the prostatic urethra and neck of the bladder were dilated. It seemed to me, from some experiments made on the cadaver, that the latter means of dilatation was not only unnecessary, but was open to the objection that, unless used with the greatest care, it was possible to inflict serious damage.

Further, I succeeded in demonstrating that by means of crushing forceps shaped somewhat like the blades of a lithotrite, and not exceeding by actual measurement in circumference that of an ordinary index finger, sufficient power might be provided to crush and assist in evacuating any stone that could be fairly seized in this way. These forceps are provided with a cutting rib within the blades, and the more powerful instruments, as you will see, from the specimens I am showing you, are fitted with a movable screw on the handle. The fragments may subsequently be

withdrawn by means of aspirator catheters passed through the wound, or even by the forceps. If care is taken to make the perineal wound correspond in size with the evacuating catheters, which should be of about the size of an ordinary index finger, there is no difficulty in keeping the bladder distended during the necessary manipulations.

The chief points in favor of this operation are these: (1) It enables the operator to crush and evacuate large stones in a short space of time. (2) It is attended with a very small risk of life as compared with other operations where any cutting is done, such as lateral or supra-pubic lithotomy, and is well adapted to old and feeble subjects. In his recent address, Mr. Swinford Edwards shows that the latter operation for large stones has a mortality somewhere about 50 per cent. (3) It permits the operator to wash out the bladder, and any pouches connected with it, more effectually than by the urethra, as the route is shorter and the evacuating catheters employed of much larger calibre. (4) The surgeon can usually ascertain, either by exploration with the finger, or by the introduction of forceps into the bladder, that the viscus is cleared of all *débris*. (5) It enables the surgeon to deal with certain forms of prostatic outgrowth and obstruction complicated with atomy of the bladder in such a way as to secure not only the removal of the stone, but the restoration of the function of micturition. (6) By the subsequent introduction and temporary retention of a soft rubber drainage-tube states of cystitis due to the retention of urine in pouches and depressions in the bladder wall are either entirely cured, or are permanently improved. To lock up unhealthy ammoniacal urine in bladder that cannot properly empty itself after a lithotripsy is to court the formation or recurrence of a phosphatic stone. Hence it is well suited to some cases of recurrent calculus. I have never known the wound to remain unhealed, except in those instances where, for some reason or other, it has been desired to construct a low-level urethra, as in an instance I have recorded elsewhere.

It is well adapted for some cases of stone in the bladder complicated with stricture in the deep urethra, as it enables the surgeon to deal with both at the same time. Nor does it expose the patient to the risk which may be attendant where lithotripsy is performed with a weakened or permanently damaged urethra. Dr. Bazy has also recently illustrated its advantages under these circumstances.

I will conclude this paper with a brief record of three illustrative cases, and show the specimens removed:

(1) A man, 24 years of age, who was cut for stone by a perineal method ten years previously, came under my care in 1888 suffering from a large stone in the bladder and a small perinæal fistula,

the result of the preceding operation. As I thought it best to try and remove the stone and close the fistula at the same time, I adopted the method I have described, and broke up with the forceps, and extracted a large phosphatic stone weighing nearly three ounces in a few minutes. The fistula tract was doubtless included in the line of section. A drainage tube was introduced into the bladder through the wound. On the fifth day normal urine was discharged through the tube, when the latter was withdrawn and the wound closed soundly in forty-eight hours. The patient was known to be well two years after this operation.

(2) A man, aged 52, came into St. Peter's Hospital in 1893, suffering from calculus and some form of prostatic obstruction. The latter complication requiring attention I selected the perineal method, and in a few minutes, partly with the crushing forceps and partly with the evacuator catheter, I removed over three ounces of very hard urate calculus in addition to a polypoid excrescence of the prostate as large as a good-sized grape. A drainage tube was passed into the bladder through the wound, and the operation was completed without delay; the tube was retained for a week, and on its withdrawal the wound healed in a few days.

(3) The third case was that of a man, aged 62, whom I operated upon in 1890. He had undergone five operations previously by other surgeons for stone, which seemed to be primarily a urate calculus, and subsequently phosphatic. When I saw him another stone had formed within eight months, his bladder was pouched and almost completely atonic, as he was largely dependent upon his catheter. The size of his bladder, irrespective of the size of the stone, led me to select perineal lithotripsy. There was a large post-prostatic pouch containing an ounce calculus, which was readily crushed by the forceps, and removed in a few minutes. I also twisted off a piece of prostatic outgrowth, which seemed to act as a valve. A drainage tube was retained for over three weeks, when the urine being normal it was withdrawn. The wound healed soundly in the course of a few days. The power and function of the bladder has been completely restored, and there has been no recurrence of stone.

I have selected these three cases as illustrating conditions of complication which not unfrequently render lithotripsy an imperfect success. The alternative operations of perineal or supra-pubic lithotomy, as usually practiced, would, I believe, have exposed the patients to a greater risk than I liked to incur. I therefore selected a proceeding which seems to me, whilst providing a most efficient and convenient means for rapidly removing a stone from the bladder, is, at all events, free from the risks of hæmorrhage and shock as not rarely attend

the older forms of lithotomy. If a stone could be dealt with as soon as it was retained in the bladder no other operation than lithotripsy would ever be practiced, except, perhaps, in some few instances where a calculus is the natural consequence of some diseased condition within the bladder which is capable of being removed.—Reginald Harrison, F.R.C.S., in *Times and Reg.*

ON MENORRHAGIA AND METRORRHAGIA.

The abnormalities of menstruation, although, as pointed out in my former lectures on this subject in the *Med. Times and Hosp. Gaz.*, to be considered chiefly in the light of symptoms rather than that of specific forms of disease, nevertheless not unfrequently assume such prominence as to demand special consideration. To none of those menstrual irregularities is this observation more applicable than to the pathological or hæmorrhagic increase of the catamenial flux which is known as menorrhagia, and to which, together with the cognate subject of metrorrhagia, or an intra-menstrual loss of blood from the uterus, I shall now briefly invite your attention.

Menorrhagia.—With regard to the first-named of these complaints it is hardly necessary to premise that the normal catamenial flow amounts to between three and six ounces of sanguineous fluid, the evacuation of which occupies a period varying from three to five days at each regular epoch; and that any notable increase in either the amount or duration of that discharge constitutes menorrhagia. A reference to a few cases of this kind, which together with others, are described in my recent work on "Clinical Gynæcology," will serve to illustrate the general pathology and treatment of these conditions.

Congestive Menorrhagia from Subinvolution.—C. N., aged 40, a farmer's wife from Kilkenny, was admitted eight months after the birth of her ninth child, suffering from endometritis and subinvolution, with excessive menstruation, her catamenial period lasting for over a fortnight, and leaving before its return an interval of only ten days, during which a slightly hæmorrhagic uterine discharge continued until the next epoch. On examination, the uterus was found low down, retroflexed, and greatly enlarged, the sound passing nearly its entire length into the cavity. The cervical canal having been rapidly expanded with my dilator, the endometrium was thoroughly curetted, and the exposed uterine surface freely swabbed over with iodized phenol, which was again applied on subsequent occasions. The flexion was then reduced, a rolled pessary introduced, hot-water uterine irrigations were directed twice daily, and the following mixture prescribed :

R.—Liquor ergotæ, B.P., . . . ʒj.
Tinctura nucis vomicæ, . . . ʒj.
Tinct. quiniæ, . . . ʒij.
Aquæ cinnamoni, ad. . . ʒ viij.
M. et fiat mistura.
St. ʒ ss. ter en die.

In less than three weeks the uterus became nearly normal in size, the metrorrhagia completely ceased, and, the monthly period having passed over without any excessive loss, she was discharged from the hospital.

I need not enter on the details of some other ordinary cases of menorrhagia and metrorrhagia that were pointed out to you at the bedside in instances of uterine myoma, chronic endometritis, and uterine cancer under treatment, the result of which is undetermined. But I may take the opportunity of calling your attention to another case of this kind which appears to me of special interest from its exceptional gravity and intractability to the treatment employed.

CASE II. *Ovarian Menorrhagia.*—E. L., aged 20 years, a shop assistant, who during the summer season had been under our treatment for menorrhagia, again presented herself at the dispensary in a worse condition than before, so that when admitted into the hospital she was in a state of extreme debility, and in fact almost exsanguine from profuse menorrhagia. This, as stated, had existed, though in a lesser degree, from her earliest menstrual epochs, but within the past two years had assumed a progressively increasing severity until her admission, when there was only a few days' interval between her catamenial periods, during which the discharge daily saturated half-a-dozen diapers, and has resulted in the condition evinced in her bloodless aspect, as well as by the intense anæmic frontal headache, extreme nervousness, physical prostration, cardiac palpitation, distressing aortic pulsations, and other symptoms of hæmorrhagic loss, of which she complained. On examination, the uterus was found somewhat congested and the left ovary enlarged to the size of a pullet's egg. Besides these local conditions, there was in this girl's family history evidence of an hereditary predisposition to menorrhagia, if not actually of the bleeder diathesis, or hæmophilia, her mother and two sisters having all suffered, though in a less degree, from profuse hæmorrhages from other organs.

When previously here under observation last summer, the symptoms described were relieved by the treatment then adopted, which consisted locally in counter-irritation with strong liniment of iodine, followed by inunction of oleate of mercury over the enlarged ovary and hot-water irrigations per vaginam and rectum each day. At the same time her constitutional condition was

improved by the raw-meat *purée* here so frequently employed in the dietary of anæmic patients; whilst, in the way of medicine, iron, ergot, etc., were thus prescribed :

R—Liquor ergotæ, B.P., ʒ j.
 Tincturæ ferri mur., ʒ ij.
 Acidi hydrochlorici diluti, ʒ ij.
 Glycerini, ʒ j.
 Aquæ, ad. ʒ viij.

M. et fiat mistura.

Sig.—One tablespoonful in a wineglass of hot water three times a day.

On this treatment she remained for nearly three months, during which her general health was improved and the menorrhagia diminished. At the end of the summer session, when our dispensary was closed and the treatment suspended, the monthly hæmorrhagia gradually returned, until her condition became that just described, and to relieve which, should all other means be unavailing, we were obliged to resort to salpingo-oöphorectomy.

Constitutional and Local Causes of Menorrhagia and Metrorrhagia.—With regard to the general causes of the conditions now under consideration it must be borne in mind that these, as just exemplified, may be either constitutional or local. Among the former we may include general hyperæmia or plethora, together with diminished inhibitory nerve-force from alcoholism, and the consequent tendency to utero ovarian congestion noticeable in women of intemperate habits. These symptoms may also arise indirectly from obstruction to the portal circulation in hepatic affections, and are commonly observed in connection with Bright's disease and other chronic renal disorders, or in the course of sequence of various febrile diseases, especially small-pox, measles, scarlatina, and typhus. Still more frequently, however, both menorrhagia and metrorrhagia are immediately due to local pathological changes in the uterus, ovaries, or Fallopian tubes. Of these the first-named organ is the starting-point of the complaint in nine-tenths of such cases, in which the excessive menstrual, or intra-menstrual, discharge may be traced to chronic endometritis and subinvolution, or else to the presence of submucous fibro-myomata or other uterine neoplasms, or to malignant disease. Next to these the various flexions to which this organ is subject, and especially retroflexion, must be mentioned as among the common causes of menorrhagia, which may, moreover, be occasioned by any visceral congestion, or even functional obstruction, such as obstinate constipation, causing interference with the pelvic circulation. Lastly, we have to bear in mind that the ovaries, whence, as I still believe, the physiological changes by

which normal menstruation is accomplished start, have their share in almost all the abnormalities of the catamenial function, and in none is this more manifest than in the frequent connection of menorrhagia with oöphoritis and with ovarian displacements or prolapse.

General Treatment of Menorrhagia and Metrorrhagia.—In dealing with menorrhagia or metrorrhagia, our primary consideration must be given to the causes, constitutional or local, of the hæmorrhagic tendency in each instance. The former, however, are beyond the scope of gynæcological teaching, whilst with regard to the latter, to which we must now confine ourselves, I need here only again point out that, with respect to congestive menorrhagia, for instance, we should endeavor to reduce the uterine hyperæmia by the treatment described in the lecture in reference to subinvolution, and, above all, by thoroughly curetting the diseased endometrium, or, if the case be one of ordinary endometritis, by application of the topical astringents and escharotics before pointed out. In like manner, in ovarian and tubal menorrhagia we must seek to subdue the abnormal condition of the appendages by hot-water injections per rectum, mercurial inunction over the ovarian region, and the internal administration of iodide of potassium and bichloride of mercury, before having recourse as a *dernier ressort* to removal of the diseased appendages. In the forms of hypermenstruation and metrorrhagia connected with uterine tumors, either these growths must be removed or their vascular supply and activity must be checked either by oöphorectomy or by the employment of the galvanic current, as is suggested by Apostoli. On the other hand, should the menorrhagia be due, as is often the case, to uterine or ovarian displacements, the rectification of these malpositions must obviously be the first step in the treatment of the case.

Astringents.—In many instances the use of vaginal injections or suppositories, with some astringent such as alum, sulpho-carbolate of zinc, perchloride or pernitrate of iron, or else tamponment of the vaginal and cervical canals, may be necessary for the immediate relief of excessive menorrhagic or metrorrhagic discharges; but at the same time it is essential to bear in mind that the utility of such applications, being at best merely temporary, they can never be regarded as in any way displacing the necessity for always seeking out and removing the exciting cause of the hæmorrhage in every case of this kind. For the former purpose, the internal employment of a vast number of too commonly useless so-called hæmostatic remedies have also been from time to time advocated, including, amongst others, the mineral acids, *hazelnut*, *hydrastis canadensis*,

muriate of ammonia, digitalis, ergot and turpentine. Of these, the two latter, viz., ergot and turpentine, are those from which alone I have, generally speaking, experienced any well-marked astringent effects in the treatment of menorrhagic discharges. Lastly, in all such cases, whatever astringent remedies, local or general, may be thus employed, their action should unquestionably be supplemented by measures directed to the relief of the existing inter-pelvic congestion, and above all, by the free use of hot-water local irrigations, saline purgatives, bromide and iodide of potassium, and abstention from marital intercourse.—Thomas More Madden, in *Hosp. Gaz.*

ERGOT IN THE TREATMENT OF PERIODICAL NEURALGIAS.

Having for a number of years relied upon ergot in the treatment of migraine, I was led to try it also in cases of neuralgias which were marked by the feature of periodicity, with results of which the following reports are illustrations:

CASE I.—My friend Dr. T—, a practising physician of this city, furnishes me with these notes of his own case. He writes: "During the winter of 1883-84 I was troubled with frequent headaches. The attacks grew more and more frequent until they assumed a periodical character, coming on daily about 6 p.m. This condition increased, until, in the early spring of 1884, they became intolerable and necessitated my staying in bed. Under the impression that the trouble was malarial I had taken quinine and arsenic, together with bromides, without relief. When I took to my bed I took thirty grains of quinine daily for three days, in doses of fifteen grains night and morning, combined with capsicum; also fifteen grains of bromide of potassium every two hours. During these three days I also took two twenty-grain doses of chloral. All this was attended with no relief, the pain beginning with an occipito-cervical aching and then increasing until the whole head was affected. On the evening of the third day you called and prescribed one drachm doses of fluid extract of ergot, to be repeated every two hours until relieved. Your prescription was:

R—Extract. ergotæ fluid,
Elixir cinchonæ āā ʒ j—M.

Sig.—Two teaspoonfuls in water every two hours, unless pain was relieved, when the intervals might be lengthened.

You stated at the time that it was a mistake to take large doses of quinine for periodical neuralgias, and directed me in the future to take but ten grains a day at 4 p.m. In an hour after

taking the first dose of your prescription I went to sleep, which was the first sleep I had had in three days, and this ergot treatment made my recovery rapid. I must add that my headache was attended with no chill or rise of temperature. Several times since 1884 I have been threatened with similar attacks, but have always been immediately relieved by your ergot treatment."

CASE II.—Mr. B— I saw in consultation with Dr. A. E. Carpenter, of Boonton, N. J., who sends me the following account, "Mr. B—'s was a case of remarkably severe periodical neuralgia, following a mild attack of la grippe. It affected the intercostals and also the great sciatic of the left side. The attacks came on about 10 p.m. every night, and were almost entirely uncontrollable. I had prescribed large doses of quinine and of other antiperiodics, without any satisfactory results. I even anticipated the attacks upon two occasions with half a grain of morphia hypodermically, but the same dose was required again before midnight. After becoming thoroughly alarmed about him, as you know, I invited you to see the case with me. It was the day after the patient had had the worst night of all. You ordered full doses of ergot in connection with moderate doses of quinine. That night the patient did not suffer at all, and had the best night which he had passed for a week. I continued your treatment for five days, and the patient made a speedy and permanent recovery. I found no necessity to give him any more morphia after beginning the ergot. The case had been of ten day's duration prior to your visit, and each succeeding night its severity was progressive."

CASE III.—Mr. W—, a German druggist, living in Greenport, L. I., came, September 4, 1893, with a story of persistent daily headaches, lasting all day, but subsiding at night, beginning at the occiput and extending anteriorly. They first came on in the summer of 1892 and lasted through the autumn, but left him in the winter. In June, 1893, they returned worse than ever, and continued to date. Ever since they began in 1892 he became much constipated, though he was never so before, and his constipation continued through the winter, when he was free from headaches. He had faithfully tried quinine and Warburg's tincture in very free doses without any relief. Pulse at his first visit, 110. Ordered to try four grains of exalgine at a dose, and if this did not relieve him, then to take a drachm of ext. ergot, fl. with elix. cinchonæ. On September 11th he reported that the exalgine gave him no relief, but the ergot, though it nauseated him, relieved him at once. He took the ergot from September 4th to September 8th, after which he has had no return of the headaches.

CASE IV.—I saw in consultation with Dr. L. Feigenblatt, of New York, Mr. W—, a young

gentleman much given to horseback riding. Began to suffer from headaches, beginning at the occiput and then extending to the temples, which came on about 11 a.m. daily and gradually grew worse till they reached their acme about 4 p.m., after which they subsided in the night, without, however, entirely disappearing. Dr. Feigenblatt failed to check their progressive severity till, on their becoming intolerable, he tried on one day thirty-grain doses of chloral with thirty of potassium bromide every two hours for two doses, with little more effect than causing a slight drowsiness. The next day, the patient becoming maniacal from pain, sixty-five grains of chloral, sixty of bromide, and thirty of antipyrin were given within two hours. This dosing caused a profuse sweating and moderate sleep. The third day a consultant who was called in recommended that quinine and Warburg's tincture, which had been tried at the beginning of his treatment by Dr. Feigenblatt, should be resumed in large doses. Accordingly sixty grains of quinine and two ounces of Warburg were administered in twenty-four hours, with even worse afternoon paroxysms of pain than before. The next day the bromide, antipyrin, and chloral doses were resumed, as the patient had got some sleep from them, but as no permanent relief from the recurrence of the attacks was expected, I was asked to see him, which I did at 1.30 p.m., October 21, 1893. I found him in bed with a pulse of 106, eyes suffused, and with some photophobia. Temperature, 99° F. Complained of considerable dull occipital headache and very apprehensive that it would soon come on in paroxysms. He had never complained of stiffness of the neck, or of aching in the spine or limbs; his only other complaint was that he had been troubled for a number of weeks with a morning cough, for which he had consulted the above-mentioned gentleman, who had seen him with his family physician for his headaches; but his cough persisted till his headaches came on, when it left him. Physical examination of his chest by me was with negative result. I advised his physician to begin at once with drachm doses of ext. ergot. fl. every hour, for three doses, with ten grains of quinine with the first two doses; and that if his stomach rejected either of the doses, that the ergot be given per rectum. I then requested the doctor to send me a report of the result. A week afterward the doctor wrote to me that with the first dose the patient experienced a good deal of relief; that he vomited the second dose, whereupon it was given by enema; and this was soon followed by complete subsidence of the headache, with profuse perspiration. This medication was repeated for three successive days, with final cure of the headaches, and what was also curious was that the second ten-grain dose of quinine, when given with the ergot, produced

decided symptoms of cinchonism, whereas when it had been given singly in much larger doses before, it had failed to do so.

The severity of the pain in some cases of periodical neuralgias is remarkable. In one instance a gentleman, aged sixty-five, the type of a sturdy, self-reliant business man, became so overcome by a frontal neuralgia, with extreme photophobia and lachrymation, which came on about 10 a.m., that he could not help crying out from it like a child. In most instances, however, such neuralgias are of a dull, aching character, but frequently accompanied with great restlessness or marked depression. Thus a married lady once sent for me on account of what she described as an intolerable heavy aching coming on late every afternoon, in the lower part of the back, with aching in both hips and down the inner aspect of the thighs, and accompanied with a profuse leucorrhœa, which would diminish in about four hours, when the aching went off. I gave her free doses of quinine and ginger, and that not succeeding, tried Warburg's capsules without effect; whereupon six grains of solid extract ergot, with three of quinine, were ordered every hour for three doses, commencing at 2 p.m. Both the aching and the leucorrhœa were checked on the first day of this treatment.

In the treatment of migraine with ergot it has been my practice to administer the fluid extract of ergot combined with an equal quantity of cinchona elixir, to obviate its tendency to cause nausea. Two teaspoonfuls of this mixture is to be taken in water as soon as the premonitory symptoms of the headache are noticed, and the patient is advised to lie down and keep very quiet. If after an hour the headache continues, a second similar dose is taken, and then a third in another hour, if necessary. As nausea is such a general accompaniment of this affection, it is provided that if either of the doses be vomited it should then be taken as an enema in two ounces of water. I have rarely failed to arrest the attacks with this medication, even in long standing cases, and with a preventative course of intestinal antiseptics in the intervals the relief from the malady has often proved permanent.—W. H. Thomson, M.D., in *Med. Rec.*

REMARKS ON THE ETIOLOGY OF CANCER.

I propose to speak, almost exclusively, of the etiology of cancer in the strict sense of the word—that is, of malignant tumours of the epithelial type. This subject has attained to great prominence during the last few years on account of the alleged discovery of parasitic protozoa in cancerous tumours. No one will be able to adopt a nar-

row view of the etiology of cancer who has read in Mr. Hutchinson's *Archives of Surgery* the series of admirable clinical records, in which is shown the connection of cancer with other morbid processes, especially chronic inflammatory lesions. While bearing in mind as much as possible of what has been imparted to us by eminent observers, I have no wish to dissemble my personal bias towards a belief in a specific parasitic agent as one factor, and that probably a necessary one, in the causation of cancer. Leaving this for the present, I will glance very briefly at some contributory influences, which have received more or less general acceptance.

Heredity.—Under this head we have to distinguish carefully between diseases in which the disease itself is unmistakably inherited, and those in which a want of resistance or vulnerability of certain tissues is inherited, which may lead to the development of the disease if certain other conditions are favorable. To the first class belong syphilis and hæmophilia; to the second, in the great majority of cases, tuberculosis and cancer. It must also be remembered that in dealing with such a common disease as cancer the influence of heredity may be apparent rather than real; for although the same disease may affect the offspring as affected the parent or grandparent, yet the explanation may be that the individual was in both cases exposed to similar extraneous influences. Among private patients Sir James Paget estimated that a history of hereditary influence could be obtained in one case of cancer in every three. This estimate, high as it may seem, would still leave 66 cases in every 100 to be otherwise accounted for. Well authenticated cases have been recorded of cancer affecting many members of the same family, and extending over several generations.

Age and Sex.—Statistical tables and daily experience inform us that cancer is most commonly met with in persons between the ages of 40 and 60, and not infrequently between 60 and the end of life. The sudden rise between 40 and 50 is due mainly to the liability of the breast and uterus at this period of life to become cancerous. Females are about twice as liable to cancer as males; but if the reproductive organs are left out of account, cancer is much more common in males. Cancer of the lip is a hundred times as common in men as in women, and cancer of the œsophagus four times. In Constitutional statistics the stomach is invariably at the head of the list as regards liability to cancer, the position of the uterus, and still more of the breast, being comparatively insignificant. While allowing due weight to the obvious fact that cancer is, in the majority of cases, a disease of the decline of life, it would be a mistake to allow ourselves to be so dominated by this fact as to ignore the occasional occurrence

of cancer before the usual age. I think some light may possibly be thrown on etiology by a more careful study of cancer occurring comparatively early in life. I may quote four instances of early cancer which I have come across quite lately without being at any trouble to search for records. The first case, which came under my own notice, was one of cancer of the breast in an unmarried woman of 33. Careful inquiry failed to elicit any evidence of hereditary transmission. The second case, also of cancer of the breast, was related to me by a medical friend. The patient's age was 34, and no evidence of hereditary influence could be discovered. The third and fourth cases have been recently reported. One was a case of cancer of the rectum in a woman, of 30, and the other of cancer of the cæcum in a girl of 22. In neither case is anything stated for or against the influence of heredity.

Chronic Irritation.—It has been said that parts which have long been in a state of chronic inflammation or irritation are liable, under the influence of heredity or senility, to become cancerous. The well-known records of "lupus cancer" are a case in point. The cancerous process is something so specific, so different from ordinary chronic inflammation, that I cannot bring myself to believe in the evolution of the one condition from the other, without the superaddition of a specific cause. To my mind such influences as heredity, senility, local damage to parts, and the involuntional changes in organs whose functional days are overpast, are so many predisposing causes to a specific disease, which prepare the way for the entrance of specific poison to the tissues. While saying this I must, however, admit that Mr. Hutchinson's records of warts and moles in the aged becoming malignant appear to afford strong ground for a belief in the evolution of cancer from simple and innocent modifications of structure. Some rare cases are on record in which cancer has followed the long-continued administration of arsenic.

The Seat of Cancer, etc.—It is a well-established observation that those parts which are frequently the seat of primary cancer are little liable to secondary deposits and *vice versa*. While these propositions will be generally admitted, it would be no easy matter to give reasons for all the observed facts on which they rest. For instance, in the case of mammary cancer, why is the live so often affected by secondary growths while the lungs may escape? If cancerous emboli can get lodged and grow in the capillaries of the liver, why does the same result occur but seldom in the case of the stomach, spleen, intestine, and kidney, which are nourished by the same cancer-laden blood? Auto-inoculation has been observed occasionally where a healthy surface has lain in contact with a cancerous one. Cases are also known in which inoculation of the stomach or in-

testines has been effected by means of fragments detached from growth higher up the alimentary canal. I may just mention, without comment, the liability to cancer of orifices, the narrowings and flexures of hollow organs—in short, parts exposed to friction and other local damage.

Geographical Distribution.—Cancer is said to be more common in Europe than in any other continent. By some authors it has been thought to be more common in low-lying districts, especially near river banks, than in elevated regions. It has also been stated that in France cancer is more common in the country districts than in towns.

Cancer a Specific Disease.—Cohnheim's theory of the origin of new growths does not, I think, carry us very far towards explaining cancer. It is more applicable to the case of simple tumours, and, perhaps sarcoma. The epithelial cells of cancer have undergone a specific metamorphosis. Normal epithelium transplanted to an abnormal situation, as may occur accidentally in surgical operations, does not grow into a cancer. A piece of scirrhous cancer transplanted into a rabbit disappears; the thyroid gland of a sheep transplanted into a man is in like manner absorbed. What, then, is the specific force which not only causes cancerous epithelium to proliferate, but also enables it to maintain its existence against the disintegrating action of the invaded tissues? Sir Jas. Paget has made an interesting comparison between cancer and the group of diseases which we are accustomed to call specific. He points out that the members of this group differ from one another as much as any one of them differs from cancer. If we compare the characters of syphilis, tuberculosis and cancer we shall find they present certain rough and general analogies; objection may no doubt be raised to points of detail. In each, for instance, the initial lesion is often solitary and local. This is followed by general infection of the system, effected primarily by means of the lymphatics and afterwards by the blood vessels. The tendency of each disease, if unchecked, is to destroy life. In each, again, after a prolonged struggle, the disease may die out and the patient survive. In only one of these diseases has a specific parasite been conclusively demonstrated as the cause, but can there be reasonable doubt that, in the case of diseases so similar in their course and development, a similar cause will eventually be demonstrated for all three?

The Specific Agent.—It is hardly likely that cancer is caused by a bacillus, for its characteristic structure is very different from that of the lesions occurring in those diseases which we know to be caused by bacilli; but it is quite conceivable that protozoa living in the cancer cells might determine their proliferation, and by means of

their toxic products exercise a more extended influence than the actual number of parasites would account for. I shall be told, I know, that the secondary deposits of cancer are all grafts from the primary one, and that the supposed parasite, if it be a *vera causa*, ought, acting by itself alone, to excite the disease in whatever situation it became implanted. The criticism is perfectly just. Let me try and state the parasitic theory a little more explicitly. It assumes that the association of the parasites with the epithelial cells, having once taken place, becomes permanent, both as regards the primary and the secondary manifestations of the disease; that epithelial proliferation alone does not constitute cancer; and that protozoa do not excite cancer in epithelial tissues unless favoured by a certain preparedness of soil. These assumptions, if proved true, would explain much that is obscure in the etiology of cancer. The theories of cancer are not few, and we may fairly ask: Does any of them give a better explanation of the cardinal features of the disease—of its pertinacious growth, its widespread generalization, its inexorably lethal tendency? I do not assert that the bodies which have been found in cancer during the last few years by many observers, and described as protozoa, are the cause of the disease. But a disproof of all connection between these bodies and the origin of cancer would not weaken the force of the general argument in favor of a specific parasite. Microscopic evidence alone will not settle the questions at issue. There is reason to believe, however, from evidence gained from the examination of specimens while still quite fresh, that some of the bodies described as parasites are at least living. What is necessary to make the evidence convincing is that the supposed specific cause should be shown to be capable of exciting cancer in an animal previously healthy, either acting alone or in presence of certain known concomitant conditions.—Dr. Catlin in the *Br. Med. Jour.*

TREATMENT OF MALIGNANT TUMORS BY INOCULATIONS OF ERYSIPELAS.

Dr. William B. Coley (*Am. Jour. Med. Sci.*) while collecting the cases of sarcoma treated at the New York Hospital during the past fifteen years, found a case that seemed convincing evidence that erysipelas possessed a powerful curative principle antagonistic to sarcoma.

Five operations had been performed within a space of three years. At the last operation it was found impossible to remove all of the tumor, and the case was considered hopeless. Two weeks after the operation a severe attack of erysipelas occurred, followed by a second attack shortly after the first had subsided. During the progress of the

erysipelas the remains of the sarcoma entirely disappeared, the wound rapidly healed, and the patient remained well seven years afterward. The diagnosis in this case had been repeatedly confirmed by well known pathologists, and there was no possibility of attributing the cure to any other cause than the erysipelas.

If erysipelas, a disease produced by a specific organism, could cure a case of undoubted sarcoma when occurring accidentally, it seems fair to presume that the same benign action would be exerted in a similar case if erysipelas could be artificially produced.

Dr. Coley applied treatment to ten cases which he has reported in detail. In addition to his own cases he has collected and tabulated all the reported cases of carcinoma and sarcoma in which erysipelas, either spontaneous or artificial, intervened. It is upon a careful study and analysis of these cases, as well as upon the more practical experience derived from his own cases, that his conclusions are based.

We find a total of thirty-eight cases of malignant disease in which an erysipelas has occurred, either by accident or intent. Of these thirty-eight cases the erysipelas occurred accidentally in twenty-three cases, and was the result of inoculation in fifteen cases (including Dr. Coley's own); seventeen cases were carcinoma, seventeen cases were sarcoma, four either sarcoma or carcinoma. The immediate and final results were as follows:

Carcinoma.—Of the seventeen cases three were permanently cured. In addition, one case of probable carcinoma was well five years after the attack of erysipelas. Of the remaining thirteen, ten showed improvement, which, although temporary, undoubtedly added to the life of the patient in most cases. One case died, as a result of the erysipelas, on the fourth day.

Sarcoma.—In sarcoma the curative action of the erysipelas was even more marked. Of the seventeen cases of sarcoma we find seven, or forty-one per cent., well and free from recurrence from one to seven years after the attack of erysipelas. In addition to these seven cases there is a probable sarcoma of the breast, that was cured.

Ten of the remaining eleven showed more or less marked improvement, in some cases the tumor entirely disappearing, and not recurring for several months. One case died as a probable result of the erysipelas, which was in this instance accidental.

In nearly every instance the tumor was not a primary growth, amenable to operative treatment, but either a recurrence after operation had been tried and failed, or from its nature inoperable.

Conclusions.—1. The curative effect of erysipelas upon malignant tumors is an established fact.

2. The action upon sarcoma is more powerful

than upon carcinoma, in about the ratio of three to one.

3. The treatment of inoperable malignant tumors by repeated inoculations of erysipelas is both practicable and not attended with great risk.

4. The curative action is systemic, and is probably due chiefly to the toxic products of the streptococcus, which products may be isolated and used without producing erysipelas.

5. This method should not be employed indiscriminately until further experiments have proved its limitations.—*The Atlanta Med. and Surg. Jour.*

THE EARLY DIAGNOSIS AND PRACTICAL SURGERY OF CANCER.

Herbert Snow, M.D., London (*Am. Jour. Med. Sciences*): Great stress is laid upon the importance of early diagnosis. Early diagnosis, while difficult, can be greatly aided by remembering that "malignant lesions are especially prone to attack degenerating organs and degenerating people. With the exception of a numerically small congenital group of tumors which I have elsewhere classified under a special term, *blastoma*, and which mostly differ from ordinary cancer in rising spontaneously, malignant new growths are almost entirely confined to women above the age of thirty-four, to men past forty. Further, they appear in organs which have fulfilled their purpose and are undergoing devolution, or else intestines whose vitality has become conspicuously impaired."

Every tumor first noticed in the breast at or after the thirty-eighth year epoch is, in the great majority of cases, principally malignant; in the remainder it is certain sooner or later to become associated with malignant features in one form or another. From this sweeping rule, the most simple cyst within the gland parenchyma, a dilated acinus or dilated duct is not exempt.

Again it is laid down as an axiom that no average species of malignant tumor in the adult ever appears without an adequate and generally ascertainable cause.

About 11.7 per cent. of cases of cancer of the breast follow sudden injury—a blow or fall; the remainder are consequent upon some agency of a neurotic character impeding the normal devolution of the mamma.

Dr. Snow lays great weight upon "mental distress." He states that he has "known of one or two cases" follow an attack of influenza.

These statements cannot be accepted as in any way proven, although they should be given careful consideration as coming from a man whose opportunities for observation in this disease have been exceptionally great. The mere fact that a cancer was first noticed shortly after an attack of

influenza gives no scientific proof that such attack was an exciting cause rather than a coincidence. The fact that influenza is a disease so widely prevalent still further weakens the argument.

The physical signs of cancer are very well described.

In doubtful cases he believes that too much reliance should not be put upon the microscope, and cites the case of the late Emperor Frederick as a striking example.

Being of the cancer age, and "suffering from steadily progressive laryngeal symptoms, the *a priori* probabilities in favor of epithelial cancer were very considerable. Yet in fallacious reliance upon certain microscopic indications of no more than merely negative value, the only measure which afforded a prospect of cure was rejected with quickly fatal result."

"The same historical event further demonstrates what is familiar to the practitioner in cancer, that the microscope for diagnostic purposes is of doubtful use."

Its conclusions may be taken without hesitation for positive purposes, but rarely or never for the negative. They may show that cancer is present, but cannot be trusted to prove its absence.

Treatment is briefly dealt with. Each case should be treated on its own merits. Early and very thorough removal when possible, but severe and protracted operations upon persons already in an exhausted condition from long standing, malignant disease, are greatly to be deprecated.

Under existing conditions of practice, wherein cancer is seldom brought to the notice of the surgeon in its incipient stages, comparatively few operations should take place, but these should be searching and thorough.

The writer strongly advocates opium, and believes that opium persistently given from the earliest moment at which there is reason to believe the disease incurable by surgical means, not only materially prolongs the individual's life, but also has often a more marked effect in arresting the growth.

Iron, arsenic, quinine tonics in general are useless except as *placebos*.—*Med. and Surg. Rep.*

EXTRACT OF BONE-MARROW IN THE TREATMENT OF ANÆMIA.—The red marrow of bone being probably the chief agent in promoting the development of red blood-corpuscles, it seemed feasible to suppose that an extract of this substance, if introduced into the human organism whilst in an anæmic state, might act as a stimulant to the formative process and increase the rate of production of the red corpuscles. In adult animals—as the ox—red marrow is limited to the larger bones of the trunk, the thick parts of the skull, and the heads of the long bones; the shafts

of the latter contain yellow marrow, which is chiefly composed of fat. In young animals—as the calf—red marrow is more abundant and may be found in the shafts of the long bones as well as in the parts just named. As the tissue-forming power in young animals is more active than in older animals the bones of the former are preferable as a source of marrow extract. To prepare the extract the heads of the long bones, obtained from recently killed animals, with other portions of bone which contain red marrow, are broken into small pieces and digested in glycerine with frequent agitation. When the extraction is complete—several days being required—the extract is filtered off and is ready for use. It is red or reddish-brown in colour and is devoid of any unpleasant taste or odour. It may be given in teaspoonful doses once or twice a day either out of the spoon or spread between thin pieces of bread. The first case in which I tried the extract was that of a little boy, the subject of hæmophilia. This child had repeatedly been in the hospital under the care of one or other of my colleagues or of myself for attacks of hæmorrhage. On each occasion the bleeding ceased; but the patient never lost the pallor of pronounced anæmia, although he was treated with iron, arsenic, cod-liver oil, and all kinds of appropriate nourishment. The last time that he was admitted the red corpuscles were counted after the hæmorrhagic symptoms had subsided and were found to be 3,800,000 per cubic millimetre. The patient was then (Sept. 13th, 1893) put on marrow extract without any other treatment, and after an interval of three weeks the corpuscles were again counted; they now numbered 4,190,000, and one month later they reached 4,400,000. Coincidentally with this increase there was a marvellous improvement of the appearance of the child; his face acquired an amount of healthy color never previously observed during his many visits to the hospital. In a second case, that of a young woman twenty years of age, with long-standing anæmia, the corpuscles numbered 3,700,000 per cubic millimetre; after taking the marrow extract for three weeks they increased to 4,000,000. She then left the hospital. In another anæmic girl the increase in nine weeks was from 1,350,000 to 3,680,000. A man was admitted for profuse hæmatemesis; after the bleeding ceased the red corpuscles were found to be reduced to 1,070,000 per cubic millimetre. He was put on marrow extract without other treatment, and, when counted on the fifteenth day, the corpuscles numbered 3,050,000. I am indebted to our house surgeons, Messrs. Newby and Brown, for these observations. I am encouraged by these and many other favourable results to direct the attention of the profession to marrow extract as an agent capable of affording, to all appearances,

valuable aid in the treatment of anæmia, and also of oligæmia due to loss of blood from causes such as placenta prævia, hæmorrhoids, and wounds.—Dr. Mann in *The Lancet*.

THE CHANGE OF A BENIGNANT TUMOR INTO A SCIRRHOUS CANCER IN THE BREAST.—The patient was a lady fifty-four years of age, who had had more or less trouble in her breast for over twenty years, this having first appeared at the time that she was nursing her first child, now twenty-six years of age. For ten years she had noticed a lump in the outer segment of the right breast which during that time had not materially altered in size.

She was seen by Dr. Cabot in February, 1893. This little mass then was about the size of a large English walnut. It was movable, and seemingly not attached, either below or to the skin. She had noticed that this lump sometimes increased and became painful at the times of her monthly sickness, but then resumed its usual condition.

Dr. Cabot saw it again in July, when it seemed possibly a little larger than at the previous examination. The skin over it showed a little irregularity of surface, the irregularity seeming to be caused by a network of fluid spaces close under the outer layer of the skin. At no time could anything be felt in the axilla.

The patient was seen again in December, she having in the meantime had some electrical treatment, in the hope of dissipating the lump. The condition of the skin was unchanged, and it was deemed wise to remove the mass, not because it seemed like a cancer, but in order to leave no chance of neglecting a serious thing. The growth was removed, with considerable tissue on both sides of it, and on section, it was found to present the characteristic appearance of a scirrhus cancer. At once the rest of the breast and the skin lying over it, and all of the axillary contents, together with the loose, connective tissue lying between the breast and the axilla, were thoroughly removed. Dr. Whitney, who made the microscopical examination of the specimen, reported the nodule to be scirrhus cancer, and after a careful search through the glands in the axilla, could find none in which any cancerous change had commenced. The dimpling of the skin seemed to be due to the drawing of little fibres, running from the growth to the under surface of the skin at one or two points.

The case was interesting, as showing how a benignant tumor may insidiously take on a malignant character, and illustrated the importance of keeping such a tumor under observation and of removing it early, if any appearance about it suggested a suspicion of its character. The wound healed by first intention. Care was taken to make the section of the growth with a knife

which was not used further in the operation; and the hands were carefully washed after this examination was made, before proceeding with the operation, in order to obviate the danger of any of the cancerous cells being transferred to the healthy parts. It seemed like a remarkably favorable case for a cure.—Dr. Cabot, in *Boston Med. and Surg. Jour.*

SOME DANGERS OF THE SCHOOL-ROOM.—Under the title of "Some Derangements of the Heart and Stomach Produced by the Usual Position Assumed by Children in School," Dr. Motais read an interesting and important paper before the Académie de Médecine of Paris. This subject received a considerable amount of attention at the International Hygienic Congress held in London in 1891. By "the usual position assumed in school" Dr. Motais means that attitude in which the pupil seats himself on the ischial tuberosity, supporting himself by leaning on the left elbow and stooping forwards, so that the trunk of the body then develops an antero-lateral curvature. The result is, firstly, that by the lateral inclination the border of the false ribs on the left side descends until it is in contact with the iliac crest. The larger curvature of the stomach is thus pressed upon the spleen and general mass of the intestines; secondly, by bending the body so much anteriorly a fold is formed at the upper part of the abdominal wall, and the anterior surface of the stomach follows the curve. The conditions produce a mechanical hindrance to the movements of the cardiac stomach. The function of the thoracic viscera is equally interfered with by means of the anterior curvature owing to the drawing together of the ribs, and also by the descent of the left half of the diaphragm towards the upper border of the stomach. The difficulty thus afforded to respiration reacts on the heart, the contractions of which are, moreover, mechanically hindered by the distortion of the thoracic cavity. The neck is necessarily somewhat twisted, and the large vessels at the root, therefore, are submitted to a certain amount of torsion. The effect of the attitude described above is especially marked when an organic affection of the heart exists. Dr. Motais is also of opinion that this position is a strong pathogenic element protracting the duration of dyspepsia. He has found that if children who suffer from this complaint are made to assume a correct posture whilst in school, the symptoms subside more rapidly than when such a precaution is not taken. The same observations are applicable to adults engaged in sedentary occupations, and Dr. Motais laid great stress on the point that the medical man, when treating cases of chronic heart or gastric disease, should give his patients directions as to the posture to be assumed when much sitting is necessary.—*Lancet*.

A NEW TREATMENT OF NASO-PHARYNGEAL CATARRH.—Bates, *Med News*, has treated with benefit more than fifty patients by syringing the lachrymal sac and nasal duct. Of the remedies used, olive oil gave the most general satisfaction. The syringe used is the ordinary eye dropper, with a tube drawn out to a fine point, bent at an angle of 90°, and about one-quarter of an inch long. It is small enough to enter the smallest punctum, preventing a return flow of the fluid.

To make the injection, the operator sits in front of the patient. Artificial light from an argand burner is reflected by the fore-head-mirror on the inner side of the eye, direct illumination being less satisfactory. The operator may also stand behind the patient, who is then directed to look upward and outward. A piece of cotton about one-fourth of an inch in diameter is placed over the semilunar fold and held with the forefinger of the left hand with slight pressure against the upper punctum; this prevents the fluid from entering the eye from the punctum of the upper lid. The thumb of the left hand everts the lower lid sufficiently to expose the punctum.

The syringe, partly filled with the fluid to be injected, is lightly held by the bulb with the thumb and the first two fingers of the right hand, the tip is inserted into the punctum and the syringe turned until the tip is at right angles to the margin of the lid and parallel to the conjunctival surface of the lower lid. Slight pressure is made on the bulb, and the level of the fluid in the syringe is seen to descend as the injection is being made. Sometimes the injection is difficult, after the tip is introduced into the punctum; and manipulation of the syringe up, down, and in various directions, will be required to free the point from the obstructing conjunctival fold. Nervous patients give trouble, and in such cocaine helps, but does not always relieve the difficulty.—*Polyclinic*.

OPERATIVE TREATMENT FOR TUBERCULAR PERITONITIS IN CHILDREN.—The author (L Conitzer), reports seven cases, four belonging to the exudative and three to the dry form. All were operated upon at the Jewish Hospital in Hamburg. The histories and results were given in detail, and the author presents the following conclusions:

1. Tubercular peritonitis can be cured spontaneously in the dry form comparatively less frequently than in the exudative type, which is cured in most cases.

2. The spontaneous cures of the exudative form of tubercular peritonitis, have heretofore been regarded as cases of chronic exudative peritonitis or ascites.

3. All forms of tubercular peritonitis can be cured or at least improved by abdominal section

even though other therapeutic measures, including puncture, have been tried previously.

4. The result of the operation depends upon the form of the disease (the best result being attained in the chronic variety), the previous duration of the disease and the eventual complications.

5. The operation is indicated when the internal therapeutics have proved of no avail.

6. The operation is contraindicated in those patients of poor vitality, or in cases suffering from tuberculosis of other organs.

7. The question of how the cure is effected by abdominal section in these cases has remained unanswered.—*Deutsch Med. Woch.*

COMPRESSION OF THE PHRENIC NERVE IN LARYNGITIS STRIDULUS.—Two patients affected with spasm of the glottis were treated by Dr. H. Bidon according to Lelivre's method of treating nervous hiccough, by compression of the phrenic nerve. The first case was in a young hysterical girl who, after a convulsive crisis, was so violently and persistently seized with spasm of the glottis, that a fatal issue appeared imminent. The author put his index finger between the two lower attachments of the right sterno-cleido-mastoid muscle and strongly compressed the phrenic nerve. The patient at once made a respiratory movement. The intermittent compression was repeated about five times a minute; the glottic spasm disappeared in about a quarter of an hour. The patient has had some attacks of the same kind since then, but the same compression of the phrenic nerve always proved efficacious.

The second case was in a confirmed tabetic patient. About ten minutes after every attack of spasm of the glottis, he felt a sudden constriction of the larynx and uttered a sound resembling hiccough; the suffocation gradually increased and he fell into a state of quasi-syncope. In this case, the compression of the phrenic nerve caused the attack to cease immediately; it recurred, however, on interrupting the compression; and after a few days all laryngeal trouble disappeared completely.

These observations appear to show that compression of the phrenic nerve is a good means of restricting, at least temporarily, the oft very dangerous symptoms associated with glottic spasm. Since the movements of the glottis do not depend on the phrenic nerve, it must be admitted that the sudden compression of this nerve acts indirectly, by provoking certain complex, or more or less generalized phenomena of inhibition.—*The Hahnemannian Monthly*.

THE DRINKING TREATMENT FOR TYPHOID.—Some years ago M. Debove recommended the use of large amounts of water internally in typhoid fever. "I make my patients drink," he said; and

this was his chief special treatment. The object was to dilute the fluids of the system and wash out the toxins in the blood and intestinal canal. M. Lichteim adopted this treatment and reports nine successful cases. Recently M. Maillart, of Geneva, has made an elaborate study of this mode of treatment, reporting fourteen cases in detail, of which one died. (*Revue de Médecine*, November, 1893, and March, 1894.) Maillart thinks that the water-drinking method should be "erected into a special method of treatment." In order to secure the proper results the patient must drink five or six litres (quarts) of water a day. There is no contra-indication for the use of water in this way, for it does not weaken the heart, but has rather the contrary effect. The results obtained are a progressive lowering of the fever, a disappearance of dryness of the mouth, a marked sedation of all the nervous symptoms, and an improvement in the action of the heart and kidneys. There is an abundant diuresis and an unusual increase in the perspiration. Urea is carried off in large amounts. The treatment does not shorten the course of the disease, but simply makes it milder and less fatal. Patients, we are told, take kindly to this method. The typhoid patient takes usually six to eight glasses of milk daily, and if to this are added ten to twelve glasses of water, the diluent effect should be very great.—*Ed. Med. Rec.*

LITHÆMIA.—On March 6th Professor DaCosta gave by invitation a lecture in the Medical Hall of the University of Pennsylvania on the Pathology of Lithæmia, and, taking this for a foundation, he indicated a line of treatment which, coming from such an authority, is worthy of full consideration. The term "lithæmia," as applied to a morbid state, involves much more than the presence in the blood of a mere excess of lithic or uric acid. Lithæmia is a modified form of gout, and appears to be the form in which gout particularly manifests itself in America; but in lithæmia deposits of urates in the vicinity of joints are not observed, and attacks of acute arthritis of toes and fingers do not occur. There may be, however, a painless enlargement of the terminal finger joints, especially in elderly people, with impairment of function. The cardiac hypertrophy and kidney degeneration of true gout do not belong to the clinical history of lithæmia. The blood tension may be increased, but it is so to a less degree than in gout, and the arteries do not exhibit the atheromatous condition that characterizes the graver form of the disorder. The symptoms have already been described by the same authority. The main points are the impaired digestion, muscular pains, neuralgic attacks and pains in the tendons, indisposition to exertion, irritability of temper, depression of spirits, fre-

quent and severe attacks of vertigo and migraine, sleeplessness, and drowsiness during the day. The main factor in treatment is regulation of the diet. The food ought to be mainly vegetable. Green vegetables (especially asparagus), fresh fruits, stale or toasted bread, with the white meat of poultry and fish, should constitute the chief items. An excess of carbohydrates, especially sugar, should be avoided. The only drink to be allowed is water, and sufficient quantities should be taken to flush the kidneys. Mineral waters may be ordered to accomplish the same purpose. Alcohol should be positively excluded. Exercise in the open air is also an important part of the treatment. But little drug treatment is required. Saline laxatives are very useful. A combination of lithium carbonate (2 gr.) with extract of nux vomica ($\frac{1}{6}$ gr.) given after meals is of special value. In attacks of lithæmic migraine a few doses of a mineral acid, it is claimed, will often cause the symptoms to disappear.—*Lancet.*

THE MEDICAL BUCCANEER.—The latest development of the profession in the United States is the "buccaneer" physician. An American contemporary says it is of no use to talk about medical reform and elevating the profession, whilst the "buccaneer" is allowed full liberty to carry out his system of medical practice. "He plays his part in manifold ways. He often roams in high places, and may even wear a professor's gown. He looms up at medical conventions, and, indeed, may be an author of no mean position. He is always clamoring for reform; he wants to reform the code, let down the bars and clear the way, so that his pilfering career may be unhampered. His neighbor stands in mortal terror of him, because he well knows that should he be required to call him in consultation the new arrival would quickly oust him and coolly take possession himself. He performs impossible operations, and always cures every case, and the unsuspecting, simple minded, honest plodder, as he reads his statistics, is quite overcome with amazement and admiration. He has a sneaking way of advertising. To get into the regular column of the quacks would be to mix with the common herd; moreover, it is highly expensive; therefore he has himself interviewed, or one of his helpers will see to it that while the great man speaks, full stenographic notes are taken, and the thing, highly colored, will be spread broadcast in the early morning press." The genus is not altogether unknown in this country, but they are happily few in number and their field of work is extremely limited.—*Hosp. Gaz.*

TOBACCO AN ALLY OF TEMPERANCE.—James

Payn in *London News*: It is in a great part due to the influence of club life, Lord Salisbury tells us, that the custom of drinking has almost disappeared among the upper classes. Something of this is perhaps owing to the influence of opinion, for even a toper who thought nothing of getting drunk in congenial company and among bacchanalian friends, might hesitate to do so among strangers, but the chief cause of the improvement is undoubtedly the introduction of the after-dinner cigar.

Tobacco was frowned upon at home before our womankind began to appreciate its soothing effect upon us, and the smokers naturally took refuge in their clubs. Then it very soon did away with the snuff-box, and more gradually, but quite as surely, with the magnum of claret after dinner. A few old gentlemen still stickle for a glass or so—which two generations ago would have been a bottle—but the minds of most men who have dined will turn, like a flower to the sun, to the smoking room.

The speeches which follow our public dinners would now be quite intolerable to the young and middle-aged but for the mitigation of tobacco. The ignorance of the anti-everythingians about social matters is proverbial, but it is never so clearly demonstrated as in those who denounce tobacco on the ground that it leads men to drink; it does lead them to drink coffee. It may be said, if it pleases the opponents of the fragrant weed, that it is only one bad habit driving out another, as the gout expels a fever, but the fever is, at all events, far the more dangerous of the two.

THE SURGICAL INSTRUMENTS OF ANTIQUITY.—Dr. Deneffe, of Antwerp, after twelve years of labor in collecting material has published a most interesting treatise on ancient surgery. He has obtained between six and seven hundred specimens, including copies. Among them, says a writer in *The Medical Magazine*, are uterine and anal specula, knives, lancets, forceps or volsellæ, scissors, spatulæ, all kinds of sounds, scarificators, rugines or raspatories, probes, cauteries, caustic-holders, cannulæ, needles, curettes, hooks for the extraction of the fetus in difficult labors, saws, ointment tubes, a needle for couching (cataract), tooth-forceps, urethral sounds (male and female), besides many others we have not space to mention.

With the exception of the trivalve and quadrivalve uterine specula, which can compare with the finest modern work, the instruments of those days were simple in the extreme. To carry out their ideas the early surgeons had to rely on intelligent locksmiths, who, it must be said, faithfully followed instructions, and in some cases produced instruments of exquisite finish. Usually they served a double purpose, one end of the instrument being used as a curette, the other end

as a spatula, and so on. Sometimes knives, curettes, or elevators of different sizes formed the two extremities. The various kinds of forceps were generally only used for one purpose; some, however, are supplied with an aural curette, a probe, etc., the object being to simplify and to make the surgeon's case more portable.

Most of the instruments of antiquity are bronze, which chemical analysis has shown to be composed of copper and tin, sometimes lead, and more rarely, zinc being added; in exceptional cases gold and silver have also been found. Some of them are made entirely of copper, as the ancients knew how to temper this metal by heating it to redness and then rapidly plunging it into cold water. Silver instruments are rare, but silver was used in some instances to damascene those made of bronze. Fragments only of iron instruments have come down to us. According to Lepsius, the Egyptians employed iron 4,000, and the Greeks 1,450 years before Christ. Dr. Deneffe points out, too, that Homer frequently refers to this metal. There are some specimens of knives with iron blades and bronze handles; also an iron hook in a bronze handle for extracting the fetus from the womb. As iron is perishable it cannot be stated positively to what extent it was used.

According to the author, the instruments found at Herculaneum and Pompeii (first century) lack the finish of those discovered in France, Belgium, and near the Rhine, and which date from the second and third centuries. He does not think, however, that the latter were made in the countries where they were found. It is probable they were imported into these Roman colonies by surgeons, who supplied themselves in Italy before starting.

A remarkable thing about all these instruments is that they are made entirely of metal; wood, ivory, or shell never being used.—*Med. Rec.*

GONORRHOEA AT THE AGE OF ONE HUNDRED AND THREE.—The interest that may attach to the case presented herewith will be by reason of the advanced age of the patient. It is exceptional enough to meet a man who has passed his one hundredth year, but to find a man at that age suffering from an acute attack of gonorrhœa or chancroids is still more exceptional.

Some doubts may be entertained as to the correctness of the age given, but his general appearance, his open frankness in giving all particulars, and the absence of any apparent motive for falsification, go to confirm it, and a severe cross-examination failed to alter any of his statements.

Although no special time is given for the decadence of the sexual functions in the male, the general impression seems to be that the sexual desire is on the wane and disappears long before the allotted "threescore years and ten." Yet

here is a man, aged one hundred and three, who "feels that he needs it," and in getting it is unfortunate enough to contract chancroids at the age of one hundred, and gonorrhœa at the age of one hundred and three.

In the following history the facts bearing on his age and manner of contracting this attack are given somewhat in detail, because of the possibility of doubt of the former, and to illustrate his state of mind in regard to the latter.

A. C., aged one hundred and three, native of Ireland, occupation formerly longshoreman, at present none, presented himself on January 30, 1894, at the Dispensary of the University Medical College, for treatment.

Examination revealed a copious characteristic gonorrhœal discharge, which he stated was only of a few days' duration. Genitals well developed and showing no signs of senility. Complains of painful urination; general health otherwise fair.

In answer to questions he stated as follows, given partially in his own words:

"Didn't know more than that chair about a woman till fifty years of age, because at home you dasn't." Then he married and shortly after he left Ireland. Spent five years in the mountains of Wales, and forty-eight years ago came to this country. His oldest living son is now fifty years, and his youngest thirty-three years of age. His second wife died twelve years ago. This is the fourth attack of venereal trouble he has had since—the previous attack, three years ago, was chancroids, which was also treated at the University dispensary, and of which he got well in about two weeks.

He feels that he needs a woman. He contracted this gonorrhœa from a woman whom he had befriended and assisted; her husband had died some six months previously. She frequently came to him complaining that she had no bread for her children, and he used to "throw" her fifteen or twenty-five cents when he had it, because so long as he had a few cents in his pocket, he could not see her children go hungry. She used to come in and drink tea and take a bite, and play a joke, till it came to this that she seduced him. "That's the way she paid me off for helping her children, and I think it will be the end of me."

The following question suggests itself in connection with this case: Could there be any causative relation between the late appearance of sexual activity and its persistence to this advanced age?—A. E. Isaacs, M.D., in *Med. Rec.*

MUSCULAR RHEUMATISM.—The following abstract in the *British Medical Journal* of an article by Leube is from the *Deutsche med. Woch.* in which he argues that muscular rheumatism is not a local disease, but a general infective disorder with spe-

cial localizations in the muscular system. The mode of onset of the disorder varies, but is sometimes marked by shivering and prodromal fever, and by *malaise* of some duration. In some cases the muscular pains may be widespread, and occasionally endocarditis is observed. Taking a series of about 200 cases, he found that fever was present in about one-third; it was seldom higher than 102° F., and generally fell after two days in hospital either rapidly or after some irregular fluctuations. In one-sixth of the cases there was a cardiac murmur at the time of admission; it is generally supposed that endocarditis, which is so common a "complication" of joint rheumatism, scarcely ever occurs in relation with muscular rheumatism. It is not possible to say in how many of the cases in which a murmur was observed this was present before the onset of the muscular rheumatism, but it was noticed that in half the cases the murmur grew fainter or disappeared while the patient was under treatment, and that whereas in all the cases together, fever was observed in one-third only, it was present in two-thirds of those in which there was a murmur. Moreover, in a few cases the murmur was observed to appear after the onset of the muscular rheumatism. Three such cases are related by Leube, but in one there was at a later stage muscular rheumatism, and in another the patient, at the time the muscular rheumatism came on, was under treatment for gonorrhœal urethritis, vaginitis, and cervical endometritis. Leube states that he has seen joint rheumatism come on after muscular rheumatism in several cases, and points out that muscular rheumatism is frequently observed after affection of the joints. Pleurisy was in a few cases observed as a complication of muscular rheumatism, but albuminuria only once. Leube concludes that it is highly probable that the infective material in muscular rheumatism is an attenuated form of the virus of acute rheumatic arthritis. In Wurzburg, where his observations were made, the cases of muscular rheumatism coming to the clinic were, as a rule, few in number and isolated, but at one time recently a large number of cases applied, so that half a ward was filled with them; this would appear to indicate an epidemic influence. He only mentions the question of treatment incidentally, but would seem to have relied on salicylate of sodium.—*North Am. Prac.*

TREATMENT OF RED NOSE.—Helbing (*Therap. Monatshefte*) calls attention to the treatment of red nose—a condition of little importance, it is true, but decidedly annoying to the possessor. The condition he refers to is the bluish-red color of some noses upon remaining for some time in a warm room, coming in from the winter air, etc. The treatment he advises is the systematic application of the galvanic current. Both poles are

applied to the nose and are continually moved about. The strength of the current he has regulated by the amount of burning complained of by the patient. Five to eight elements of an ordinary battery suffice. If the patient is very sensitive, the anode may be applied to the zygoma and the nose gently stroked with the cathode. This application is followed by an intense redness of the skin, which lasts for an interval of two to forty-eight hours. Too strong currents must be avoided on account of the excessive irritation they produce. The applications are repeated at intervals of two to three days. The method requires patience, and a considerable number of applications (at least ten to fifteen) and the author has had to hold as many as thirty sittings. The author has used the method in twenty-one cases, and always with success, and gives a report of two of the most obstinate cases.—*Cincinnati Lancet Clinic*.

LOCOMOTOR ATAXY.—Dr. Forbes Winslow says: In June I was consulted by the friends of a man aged thirty-four years, who was suffering from marked symptoms of locomotor ataxy. The complaint had been gradually developing for the last two years, and the supposed cause was a fall from his horse in the hunting field. There was complete want of co-ordination in his movements, he was quite unable to walk without the assistance of two sticks, and when seated in a chair he could not raise himself without assistance. Phosphate of soda in combination was injected into the neighborhood of the spinal column. After the twenty-fifth injection marked improvement became visible, and on the completion of the fiftieth injection my patient was completely cured. He could run up and down stairs, all the want of co-ordination had disappeared, there was positively nothing wrong to be detected in his gait, and all sticks and mechanical helps were thrown aside. Since I first became cognizant of the treatment I have tried it in other cases, and in all the disease appears to be yielding to its use. It has been tried with the utmost success in Belgium, and the above is in itself so important as to warrant my publishing it.—*Med. Brief*.

THE PUPILS IN ANÆSTHESIA.—In using chloroform it is advisable, after the patient has become apparently insensible, to watch the pupils as a guide to the state of the medulla. After complete anæsthesia is induced, the pupils, which were previously contracted, begin to dilate. This dilatation is the danger sign! It indicates the cardiac respiratory centres are beginning to be inhibited, or probably paralyzed, by the anæsthetic, and warns the operator to suspend, temporarily at least, the inhalation. Often cases are witnessed wherein chloroform is being administered in which all the limbs, apparently flaccid, when raised and

let fall, drop to the table as if dead, yet retain consciousness of pain. In such the pupils are well contracted; a few moments after the contraction they will begin to dilate, and then all sense of pain is abolished. At this stage the danger of chloroform, and also of ether, is, indeed, considerable, if the anæsthetic is carried too far; for then the protective living wakefulness of the medulla is being dangerously overcome.—*Medical Brief*.

TREATMENT OF ASTHMA.—Prof. Dieulafoy. 1
Early stage of paroxysm:

R—Cocaine muriat, grs. xv.
Aque dest, ℥v.

M. ft. sol.

Sig: Apply this to the interior of the nasal cavity. May be applied to the nasal cavity of the throat by means of the spray.

If this does not cut short the attack one fluid dram of pyridin may be poured on a handkerchief and kept near the patient, also stramonium leaves and nitrate paper may be smoked.

2. *At height of paroxysm:*

R—Morphine muriat, grs. iss.
Aque dest, ℥iiss.

M. ft. sol.

Sig: Inject half a hypodermic syringe of this solution, and repeat in a quarter of an hour if necessary.

3. *Inter-paroxysmal period.*—Administer twenty to thirty grains of iodide of potassium in twenty-four hours. Of course its continuance is governed by effects. May in some cases with advantage alternate the potash treatment by giving it for two weeks and then give belladonna for two weeks. At the same time a course of arsenic should be given at intervals.

4. If there be *emphysema* inhalations of compressed air.—*Am. Pract. and News*.

TREATMENT OF INEBRIATES IN SWITZERLAND.—The Foreign Office has published a useful paper in the miscellaneous series of reports giving a translated summary of laws in force in Switzerland regarding the treatment of inebriates. The laws and regulations in the twenty-two cantons appear to differ but little from each other in their essential points, and are considered in principle as effective measures against intemperance. Habitual drunkards are liable to fine and imprisonment, and compulsory confinement in homes or houses of correction; while considerable responsibility is incurred by publicans who supply strong drinks to children, to those already intoxicated, or to those who are by reason of their intemperance forbidden to enter taverns. The report for the year 1892 of the Ellikon Home for Inebriates shows that for 1891 of those under treatment 37.5 per cent. remained

abstainers, 32.5 per cent. remained intemperate, and 30 per cent. relapsed.—*Br. Med. Jour.*

THE EARLY MANAGEMENT OF CLUB-FOOT.—Dr. De Forest Willard, in a clinical lecture of this subject offers the following conclusions:

1. The first month of life is the period of greatest growth, and to neglect treatment of club-foot during this time is to permit the bony and soft tissues to become permanently misshapen.
2. Rectification should be commenced from birth by various simple measures.
3. Correction can be accomplished by a variety of dressings.
4. Manipulation is exceedingly important for the production of a flexible foot.
5. Apparatus should be applied as soon as the foot and leg are in position for its application.
6. Rectification and manipulation should be continued up to the age when the infant is ready to walk, at which time, if the foot cannot be placed upon the sole firmly operative measures should be instituted.—*Therap. Gazette.*

PYOCTANIN INTERNALLY IN MALIGNANT GROWTHS OF INTERNAL ORGANS.—Dr. O. Maibaum (*Wiener Medizinische Presse*) has tried this drug in the treatment of internal neoplasms of a malignant nature, in Prof. Wassliew's clinic in Dorpat, Russia. He administered it three times a day in doses of six cgms (one grain), in pill form, or associated with belladonna as a suppository:

R.—Pyoctanin, . . .	0	06	(gr. j).
Extr. Belladonna, 0	0	02	(gr. 1-5).
Cocoa Butter, . . .	2	0	(grs. xxx).

In a case of pronounced cancer of the stomach an astonishing result was obtained; the patient increased in weight, the vomiting and eructations ceased and his appetite re-appeared. In another case where there were adhesions with the liver and metastases, improvement followed, but the patient soon left the clinic. Also in cases of carcinoma of other organs it was found to be of great service.—*Med. and Surg. Rep.*

MENTHOL IN SKIN DISEASES.—Since the connection of "dermographism" and urticaria with intestinal disorders has been recognized, more attention has been paid to the influence of intestinal disorders on the condition of the skin. According to recent investigations there are many cases of common acne where the patient shows a great excess of indican in the urine; but as soon as intestinal putrefaction is stopped by the internal administration of menthol in small doses (0.25 gramme), the skin eruption becomes, *pari passu*, markedly improved with the disappearance of the indican which ensues.—*Lancet.*

CHLORATE OF POTASH IN CARCINOMA OF THE STOMACH.—Professor Brissaud, on account of the well-known action of the chlorate of soda in affections of the mouth, tried the less poisonous salt, the chlorate of soda, in gastric cancer. In a whole series of cases, he has obtained very favorable results. The hæmorrhages ceased, the cachexiæ improved, and even the tumor disappeared, in the course of six weeks. From the large number of cases it cannot be assumed that they were all cases of mistaken diagnosis. As the soda salt is much less poisonous than the potash preparation, it may be given in much larger doses. It is best prescribed in a watery solution, 8, 10 or even 16 grammes in 100 grammes of water; to be taken by the teaspoonful. The only contra-indications is the presence of even a slight albuminuria. In spite of these large doses no symptoms of poisoning were observed. The greater solubility of the soda salt would seem to indicate it of value in buccal diseases.—*The Hahnemannian Monthly.*

RECTAL ALIMENTATION.—Huber has recently shown by actual experimentation, that from fifty-eight per cent. to seventy per cent. of fluid egg albumen may be absorbed from the rectum without peptonization. A slightly larger proportion of albumen was absorbed after peptonization, but less than half as much when chloride of sodium was not added. The proportion of salt found necessary to stimulate absorption, was one gramme, or one-fourth of a drachm for each egg.—*Mod. Med. and Bact. World.*

DIET IN ULCER OF THE STOMACH.—Doctor Roux declares that in ulcer of the stomach, foods should be chosen that are digested in the intestines, such as milk, eggs, starches, fruits, and green vegetables; farinaceous substances and eggs should constitute the chief diet. Lentils are preferable to potatoes and beans; among green vegetables salads are excellent; green peas, turnips and carrots should be mashed before eating. Light puddings are easily digested, especially if they contain eggs.—*Journal d'Hygiene.*

VOMITING OF PREGNANCY.—A writer in the *Lancet* says: "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache, and pruritis pudendi of the puerperal condition yielded as readily, and to one application."—*Med. Summary.*

THE SUIT OF DR. AMICK AGAINST THE ST. LOUIS CLINIQUE AND FACULTY OF THE COLLEGE OF PHYSICIANS AND SURGEONS, OF ST. LOUIS, HAS BEEN DECIDED IN FAVOR OF THE PLAINTIFF.—*Am. Med. Journal.*

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TORONTO, JUNE, 1894.

The LANCET has the Largest Circulation of any
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THE SURGICAL TREATMENT OF PULMONARY CAVITIES.

The tendency of the surgery of to-day is to invade the domain of medicine at points, which a decade since were thought to be forever exempt from the knife. Perhaps the most fashionable disease of to-day, from both a medical and surgical standpoint, is appendicitis. Every medical journal we read has accounts of operations, cases, notes and conclusions in regard to this recently fell disease. It must give way, however, to something new, for appendicitis, even surgically considered, is not new in this rapidly advancing age. What will be the next grand achievement of antiseptic surgery? Pulmonary consumption is to-day, by far and away, the most dreaded disease we have to cope with. Notwithstanding all that has been done in the way of improved treatment in the past dozen years, or since the true nature of the disease has been fully recognized, it stands the *bête noir* of our profession. And he must be a courageous and sanguine man, who will stand up to, and fight with all the weapons at his disposal, this monster, tuberculosis.

Not to mention medicines without number, we have antiseptic agents as such; food, clothing, dog's serum, exercise, inhalations, counter irritation, goat's blood, hygienic measures, hydrotherapy, injections, mineral waters, health resorts, ozonized oxygen, the pneumatic cabinet, and many other agents at our disposal in the management and treatment of our patient. Yet with all these

recent advances, the disease goes on with its deadly certainty, and perhaps no more persons are cured to-day than were cured twenty-five years ago, though we think it will be admitted that a greater margin of life is given to persons in good circumstances than could have been done at that time.

The surgeon has made the attempt to step in where the physician has so lamentably failed, and now proposes to relieve the latter of some of his duties by treating phthisical cavities.

This idea has been before the profession for some time, but it is only lately that it has begun to assume a tangible form, and to be reckoned among the means which have to be considered for the cure of phthisis pulmonalis. Cases of resection of portions of the lung with successful results, of aspiration and drainage, have been from time to time reported, but the operation has not taken hold of the professional mind generally. When a cavity has formed, the ordinary medical man loses hope, and unless he be both sanguine and courageous, is very apt to abate his zeal in the pushing of curative (*sic*) measures, and gradually drops into those which are alleviative in their nature. Had he the cavity alone to deal with, many a man with admirable courage would be willing to attempt its cure, and would spare no time or pains to attack the foe in its lair. But it is so rare to get a single cavity without adjacent lesions, without extensive surrounding pulmonary disorganization, that the attending physician has it borne forcibly in upon his mind that whatever benefit might accrue to the patient from surgical operation in the way of alleviating certain symptoms, such as profuse or fœtid expectoration, it could only be temporary, and he would be sanguine, more, we think, than wise, who would look for lasting benefit to his patient by any surgical procedure which has yet been devised. So many serious complications are likely to follow incision of the pulmonary tissue, and so many sudden fatal results have followed surgical interference with phthisical cavities, even when undertaken by the most experienced and skilful men, that he will be wise who relegates the work to another, who, with less admirable courage than that of inaction, is willing or anxious to undertake the operation.

Dr. Clifford Allbutt has recently said, "that

ordinary phthisical cavities will lend themselves to systematic respiration, or other tapping is not at present probable."

In contradistinction to these views we may note the conclusions of Dr. N. P. Dandridge in a paper recently presented to the N. Y. State Medical Association. The writer is certainly careful and discriminating, and our readers will be interested in his conclusions, which are practically that a certain number of lung cavities can be successfully dealt with by incision and drainage; that cavities in the lower portion of the lungs—if single and superficial, and the general condition of the patient permits (how rare!)—should always be opened. Cavities at the apex should only be opened where free and persistent expectoration is present, and has resisted treatment, and the rest of the lung is not involved.

Abscess, gangrene and hydatid cysts should be opened and drained whenever they can be located.

Closure of the pleura should be present before evacuation of a cavity is attempted.

In cases of pyo-pneumothorax the fistulous tract should be explored, and any cavity freely laid open by the cautery.

Cavities that have been opened are best treated by packing with gauze, preferably iodoform.

The further careful trial of such agents as iodoform, chlorine gas and chloride of zinc is desirable to determine as to whether the tubercular infiltration may not be modified by them.

It is very desirable, for the further extension of surgical interference in pulmonary cavities, that the means of locating such cavities and of determining their size, and the exact character of the tissues that overlies them, should be perfected by further study, and for the accomplishment of this the surgeon must look to the physician.

In our modest opinion, the author, by guarding the operation so carefully, almost precludes any operation at all. We certainly agree that the attendant circumstances cannot be too carefully considered before any active surgical interference is permitted.

CHRONIC CONGESTION OF THE LARYNX.—

R—Creosote, gram. 15.
Carbonate of magnesia, gram. 6.
Distilled water, gram. 90.

Teaspoonful in a pint of boiling water as inhalation.

IS CHOLERA COMING ?

Thanks to our excellent system of quarantine and to the activity of our local boards of health throughout the Dominion, we have heretofore escaped this dread scourge, which has caused so much alarm in Europe and such dire loss of life in Asia and the Orient. Last summer many people on the American Continent were apprehensive of a visit, fearing its introduction through the expected influx of visitors to the World's Fair.

As it resulted, the number of people from Europe and Asia visiting the Fair was small and the Continent escaped, whether for this reason or not it would be difficult to say.

It has again made its appearance in the East. It has not been stamped out by the winter even, in Russia, several centres being reported both in Turkey and Russia. With the coming of spring it has shown itself in Constantinople, and some of the foreign legations have left for more salubrious quarters. In several towns and villages of Poland it is now admittedly epidemic. Portugal has a large number of cases of what is perhaps euphemistically called *Cholerine*, both in Lisbon and in the country districts.

It has been claimed by Lachmann that, in Hamburg during the last epidemic, the water supplied by the city did not contain bacilli, or at least they could not be demonstrated in it, as also that the epidemic did not disappear from the city after the exclusive use of boiled water from the reservoir, and that hundreds of persons were seized with the disease who had never drunk city water at all. He also shows that in small towns not supplied with water from a general source, the percentage of cases was higher than in Hamburg which was so supplied.

The truth seems to be that the dejecta of cholera patients contain both bacilli and contagion, and if we look to the hibernation of the disease, as in Russia and Turkey during the past winter, we are led to the conclusion that the contagion is more active than the cholera bacilli. This has also been shown by Pettenkoffer and others.

To be most active the cholera dejecta must be dry, and the bacilli retain their virulent properties for an indefinite time when they are des-

sicated. It has been a matter of long experience, that the worst epidemics occur in dry seasons.

Like enteric fever the spread of the disease is always through dejecta and material contaminated by them.

Looking at this, we may well be on guard for the coming hot months. There is no specific treatment for the disease yet known, and the best that can be done for it, once found, is to treat on general principles. In the matter of individual and family prophylaxis, general principles again are all that can be advised. Keeping the system well up to the highest normal plane of health; pure water, rendered so when there is any doubt, by boiling and filtration; plain nutritious food and plenty of rest; avoidance of over-fatigue and worry, all should be urged upon the community with especial care if the disease shows, even at a considerable distance. We took occasion last year to give our readers the benefit of the experience of those who best know how to deal with the disease, and we shall again as the season advances, endeavor to keep them posted on any new developments which may be to the fore.

GUAIACOL.

The use of guaiacol as an antipyretic has recently excited a great deal of discussion.

An American authority cites some twenty experiments with guaiacol in phthisis, pneumonia, tertian ague, typhoid fever, rheumatic fever and influenza.

The dose was about thirty drops rubbed on the skin. In many cases the temperature had come down from 104° F. or thereabouts to the neighborhood of 100° within a few hours of the application, and remained down for several hours. In nearly every case, there was profuse sweating as the temperature descended.

The trouble with the method, however, was that most of the patients suffered more or less from a depression of the bodily powers, during the fall of temperature, in many cases of a nature extremely disquieting to the patient.

The prevalent sentiment regarding febrile manifestations seems to be that reasonable temperature, say not more than 103°, have in most cases very little disturbing effect either on the patient's com-

fort or on the outcome of the disease, and could be sufficiently controlled by absolutely safe remedies, such as diuretics, aperients, etc.

Such elevations of temperature correspond to that overproduction of heat which results from the natural effects of the tissues to destroy morbid material—the law of life being, that all increases of destructive metabolism is accompanied by increase of heat. So long as this material continues to irritate the tissues the fever must continue, the issue being in the majority of the cases, victory for the tissues.

To check this natural process forcibly without removing the offending matter, is an unwise and injurious proceeding on the part of the therapist. The only proper method is to remove the offending matter from the body, or, if this cannot be done, to strengthen the tissues in their struggle, avoiding all depressing drugs.

In hyperpyrexia, however, when the temperature remains above 104° for days, hurting the heart-muscle, or when the nervous system of the patient is greatly disturbed, and the excretions and secretions are checked, we have to do, not with the natural heat-production of the internal contest, but probably with derangement by the hot blood of the nerve-centres which regulate the production of heat and its escape from the body. In these cases active interference is called for. Cool sponging or bathing, etc., are to be preferred to the use of depressing drugs.

Occasionally the modern febricides may be used with temporary benefit. Here, along with antipyrine and acetanilide, guaiacol may be used, but with great caution. It might be used in less quantity, say less than thirty drops of guaiacol.

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Scholarships.—Third Year—First and second scholarships divided between M. Currie and A. K. Merritt; second year—first and second scholarships divided between W. Goldie and E. L.

Roberts; first year—first scholarship, J. H. Eliott; second scholarship, A. H. Addy.

George Brown memorial scholarship in medical science—in order of merit—W. E. Crain, C. E. Smyth, J. D. Curtis, R. B. Wells, W. J. McCollum, J. Bull.

Degree of M.B.—T. Agnew, W. H. Alexander, W. A. Ball, J. Becket, W. L. Coulthard, G. M. Ferris, L. O. Fiset, E. B. Fisher, A. E. Gardner, E. D. Graham, G. B. Gray, W. A. Hackett, R. G. Laycock, K. C. McIlwraith, J. W. McIntosh, H. MacLaren, J. Park, G. D. Porter, H. H. Sinclair, F. W. Smith, J. Stenhouse, W. Stephen, F. W. Stockton, T. Wickett, H. L. Reazin, D. J. Armor, W. B. Boyd, J. Bull, B. Campbell, F. Coleman, W. E. Crain, J. Crawford, J. D. Curtis, H. A. Cuthbertson, J. W. Ford, A. Galloway, A. B. Greenwood, H. Guelph, N. M. Harris, R. H. Hastings, T. C. Hodgson, H. A. Johnston, A. H. Jones, J. A. Lawson, R. M. Lipsey, D. A. McClenahan, W. J. McCollum, J. F. McKee, J. R. Mencke, H. N. Rutledge, J. P. Sinclair, C. E. Smyth, N. C. Wallace, R. B. Wells, J. A. White, T. H. Whitelaw.

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PRIMARY EXAMINATIONS.

Honors.—E. L. Roberts, Lynedoch, Ont.

Passed.—W. L. Addison, W. H. Alexander, E. H. Arkell, D. Buchanan, G. S. Burt, J. F. Boyle, T. H. Bier, T. C. Bedell, G. W. Brown, W. J. Beasley, W. G. N. Byers, B. G. Connolly, G. E. Cook, D. T. Crawford, H. Clare, Jennie Drennan, W. F. Drysdale, J. J. Elliot, J. H. Ferguson, T. H. Farrell, W. Goldie, J. S. Goodfellow, O. Graef, F. W. Hodgins, L. Hogg, W. Hird, G. V. Harcourt, E. S. Hicks, W. J. Henderson, C. G. Johnson, W. W. Jones, W. D. Keith, L. Lawrason, J. S. Morris, J. D. MacLean, H. G. S. Murray, R. Moore, G. Musson, Maggie MacCallum, H. Macklin, George More, G. E. Millichamp, W. J. Malloch, H. W. Miller, W. McDonald, A. S. McCaig, J. R. McRae, H. S. McDonald, W. B. McKechnie, P. S. McLaren, N. W. McInnes, J. M. McCarter, D. W. McPherson, C. S. McKee, W. H. Nichol, J. H. Oliver, J. I. Pratt, A. W. Partridge, H. G. Pickard, A. B. Parlow, J. Pritchard, E. K. Richardson, H. H. Ross, F. S. Rounthwaite, E. Robinson, J. W. Routledge, J. A. Rannie, A. Ruppert, J. P. Russell, J. Reeves, A. A. Small, Emma Skinner, Maggie Symington, I. G. Smith, C. R. Sneath, D. W. Shier, Christina Sinclair, R. W. Shaw, W. J. Stevenson, F. W. Smith, J. S. Thorne, J. E. Tyndall, W. M. Teetzel, H. E. Tremayne, Adelaide Turner, Annie Verth, H. E. Wallace, B. E. White, S. H. Westman, W. H. Weir, E. C. Weekes, E. B. Webster, F. G. Wallbridge.

QUEEN'S UNIVERSITY, KINGSTON.

University Medals—Gold, Walter T. Connell, Spencerville, Ont.; silver, J. W. Morden, Picton, Ont.

M.D., C.M.—James Ross Allin, Bath; William J. Anderson, Glenstewart; Joseph A. Boucher, Charlo, N. B.; W. T. Connell, Spencerville; F. J. Farley, Brighton; G. D. Fitzgerald, Peterboro'; Cyril Fulton, Iroquois; P. J. Kinsley, Wolfe Island; B. J. Leahy, Kingston; J. W. Morden, Picton; A. R. Myers, Forfar; F. C. McCutcheon, Seeley's Bay; A. B. Parton, Iroquois; W. W. Sands, Sunbury; James Seagar, Ottawa; J. A. Stevenson, Stella; H. G. Williams, Kingston; W. A. Young, Kingston.

MANITOBA MEDICAL COLLEGE.

Scholarships—Intermediate—A. Hamman, \$80; J. A. Watson, \$60; H. P. Hargrave, \$40; A. S. Munro, \$100; J. R. McRae, \$80; G. E. Curtis, \$60.

M.D.—J. N. Andrew, F. W. E. Burnham, F. G. Brien, George Camsell, J. S. Conklin, E. A. Crokot, S. J. Elkin, J. R. Gunne, Robert Goodwin, John Gahan, J. K. McLennan, Don. McDonald, H. C. Norquay, William Stevenson, J. S. Stewart, A. E. Versailles, C. M. Vanstone.

C.M.—F. G. Brien, F. W. E. Burnham, J. S. Conklin, E. A. Crokot, George Camsell, S. J. Elkin, John Gahan, Robert Goodwin, J. R. Gunne, Don. McDonald, J. K. McLennan, Wm. Stevenson, C. M. Vanstone.

WESTERN UNIVERSITY, LONDON.

M.D.—C. F. New, — Hughes, H. J. Ferguson, C. A. Elliott, A. F. Franklin, J. D. D. McLean, D. M. Dunn, D. McBain, H. Stevenson, J. C. Forsyth, W. Northrup, D. M. Kelly, A. J. Peel, B. F. Leys.

HALIFAX MEDICAL COLLEGE.

M.D., C.M.—Annie Isabel Hamilton, Arthur A. Dechman, Wm. F. Cogswell.

ONTARIO MEDICAL ASSOCIATION.

We call our readers' attention to the announcement of the meeting of the above association, in Toronto, on Wednesday and Thursday, June 6th and 7th.

It will be seen by the programme which we append that the papers to be read will be varied and interesting. The officers have been indefatigable in their efforts to make this meeting a grand success. Several eminent American visitors have

promised to attend and take part in the proceedings; a number of Montreal medical men have also been invited.

It is hoped that there will be a grand rally of the members of the Association, of whom, we believe, there are some 800. Medical men who are not members will be many times repaid by joining. The relief of a couple of days from the toil and anxiety of practice; the meeting with old friends, college mates, perhaps; the brushing against men who are enthusiasts in their line of work; the practical points brought out in discussing the papers; the open-hearted reception by the city *confrères*, all combine to make a visit to the convention highly pleasurable and profitable.

The objects of the Association are: The cultivation of the science of Medicine and Surgery; the advancement of the character and honor of the Medical Profession; the elevation of the standard of Medical Education; the promotion of Public Health; and the furtherance of unity and harmony among its members.

The officers are: President, L. McFarlane, Toronto; Vice-Presidents, T. K. Holmes, Chatham; Bruce Smith, Seaforth; J. C. Mitchell, Enniskillen; A. T. Rice, Woodstock; General Secretary, D. J. Gibb Wishart, Toronto; Assistant Secretary, J. N. E. Brown, Toronto; Treasurer, J. H. Burns, Toronto.

PROGRAMME.

The President's address, Dr. L. McFarlane, Toronto.

Discussions :—“The Treatment of Strangulated Hernia,” J. Wishart, London; F. W. Strange, Toronto; R. Whiteman, Shakespeare; G. S. Rennie, Hamilton. “Some Remarks on the Treatment of Chronic Diseases,” J. E. Graham, Toronto; R. W. B. Smith, Seaforth; R. H. Preston, M.P.P., Newboro'. “The Use of Strychnia in Ordinary Practice, with Special Reference to Pneumonia and Chronic Heart Disease,” J. H. Duncan, Chatham; J. T. Fotheringham, Toronto; A. C. Gaviller, Grand Valley; H. J. Saunders, Kingston. “Placenta Prævia,” J. Algernon Temple, Toronto; A. McKay, M.P.P., Ingersoll; J. H. Burns, Toronto; G. T. McKeough, Chatham. “Symposium in Influenza”—“Its General Features,” L. M. Sweetnam, Toronto. “Its Nervous Phenomena,” S. Lett, Guelph; “Its

Thoracic Phenomena," Chas. Sheard, Toronto ;
"Its Digestive Phenomena," T. S. Harrison,
Selkirk.

Papers by Guests.—"Cancer of the Breast in
its Clinical Aspect," W. H. Hingston, Montreal.
"Cholecystenterostomy and Gastro-duodenostom-
ies by aid of Murphy's Button," H. Mynter,
Buffalo. Papers are also expected from, A. R.
Robinson, New York ; G. W. Fox, New York ;
J. Stewart, J. C. Cameron, and T. G. Roddick,
Montreal, etc.

Papers by Members. "Atrophic Rhinitis," J.
Price Brown, Toronto. "The Contagiousness of
Diphtheria," J. R. Hamilton, Port Dover. "The
Artificial Feeding and Care of Infants," J. W.
McCullough, Alliston. "Placenta Prævia—a
Case," J. Campbell, Seaforth. "McGill's Opera-
tion for Prostatic Enlargement," A. McKinnon,
Guelph. "Photographing Pathological Specimens,"
N. A. Powell, Toronto. "Treatment of
Consumption," E. Herbert Adams, Toronto.
"Law vs. Theory in Therapeutics," G. M. Ayls-
worth, Collingwood. "Inflammation of the
Frontal Sinus," F. N. G. Starr, Toronto. "Cho-
lecystotomy," R. Whiteman, Shakespeare. "Cep-
halhæmatoma," E. Bromley, Bright. "Surgical
Interference in Typhlitis—When? How?" G. A.
Bingham, Toronto. "Hip-joint Disease, Diagno-
sis and Treatment," W. W. Bremner, Toronto.
"The International Congress of 1894," E. E.
Kitchen, St. George. "Uncured Gonorrhœa,
Causes and Sequences," E. E. King, Toronto.
"Placenta Prævia with Hydatids," A. Bethune,
Seaforth. "Paralysis Agitans," E. H. Stafford,
Toronto. "Treatment of Morphia Poisoning by
Permanganate of Potash—Report of Experi-
ments," Graham Chambers, Toronto. "Head-
ache," D. Clark, Toronto. "Report of Cases of
Abdominal Section, with Remarks on Same," A.
Meek, London. "Supra-pubic Lithotomy—a
Case," W. J. Gibson, Belleville. "A Note on the
Therapeutics of Diuretin," A. McPhedran, Toronto.
"Papilloma of the Ovary—Report of Two Cases,
with Photographs and Drawings," Jas. F. W.
Ross, Toronto. Papers are also expected from,
A. B. Welford, Woodstock ; J. M. Cotton, Lamb-
ton Mills ; R. King, Peterboro' ; L. Brock,
Guelph ; W. Britton, Toronto ; J. E. Eakins,
Belleville, etc.

THE RHEUMATIC NATURE OF CHOREA.—Sir
Dyce Duckworth, of London, *Med. Rec.*, presented
a communication with this title, of which the
following were the conclusions: 1. Chorea is not
only, as is generally believed, related to rheuma-
tism, but is itself a variety and a manifestation of
this disease. 2. Chorea is a form of cerebral
rheumatism, representing one of the many extra-
articular varieties of this disease. 3. Lesions may
be found in the heart and in the brain, and, as far
as we can say to-day, the cortical region is the
part involved. 4. It is impossible to distinguish,
during life or after death, any difference between
the endocarditis due to rheumatism and that which
is supposed to be due to chorea. 5. Shock,
mental overwork, or physical emotion are the
causes ordinarily producing chorea, but these can
give rise to the disease only in children who have
inherited the rheumatic habit. 6. The symptoms
of chorea point to the action of certain systemic
poisons, and, as these have been shown to be the
efficient cause of rheumatism in about eighty per
cent. of all cases, so we ought to conclude that it
is the efficient cause of all cases of chorea, or that
at most in a small percentage the disease results
from the action of some other toxic substance
having a remarkable affinity to the rheumatic
poison. 7. As the manifestations of rheumatism
are now clinically recognized in parts of the body
other than the joints, so chorea may be considered
as a variety of rheumatism specially affecting the
brain.

ELECTRICITY IN AMENORRHŒA.—Panecki, *Ther.
Monatsh. ; Br. Med. Jour.*, has found electricity,
and particularly the faradic current, the most
successful means of dealing with amenorrhœa. It
is necessary that the poles should be introduced
into the uterus and be allowed to act there.
This treatment is well borne, and the current
can be increased at each sitting, the number
of the latter required averaging from five to
thirty, and their duration five to fifteen minutes
during successive days. The author's experience
includes 18 cases in which the cure of the con-
dition was established a year or more ago, the
patients still remaining well. One of these, a
married woman aged 31, had never menstruated,
though she was subject to periodical affections
(severe headache, etc.) The treatment on various

lines had extended over six years, but with absolutely no success. The author at the expiration of one of these periods commenced the application of the faradic current, and after twenty-eight successive sittings a small flow became apparent. During the following interval six more applications were made, and the patient is now well and relieved of all symptoms.

THREE PRESCRIPTIONS:—We take the following from *Hosp. Gaz.*

Cough Mixture in Phthisis:—

R—Liq. atropiæ sulph. ℥ xij.
 Syr. codeinæ ℥ iss.
 Infus. rosæ acidi ad ℥ vj.—M.

One tablespoonful when necessary.—*Pharmacopœia of the Royal Infirmary, Edinburgh.*

For Vaginismus:—

R—Thymolis gr. iij.
 Ext. belladonnæ gr. xij.
 Pot. bromidi ℥ ss.
 Ol. theobromæ ℥ iv.—M.

To make four suppositories. One when necessary.—DE SINCY.

For the Green Diarrhœa of Infants:—

R—Acidi lactici diluti ℥ iv.
 Tinct. limonis ℥ j.
 Syr. simplicis.
 Aquæ āā ℥ij.—M.

A teaspoonful thrice daily after suckling.—*The Practitioner.*

SINGLE LIGATURE OF THE CORD.—Nguyen Khac Can bases his opinion of the superiority of a single ligature upon his observation that out of 68 cases of labor, *Boston Med. and Surg. Jour.*, with double ligature of the cord, there were 4 cases of retention of the placenta; and out of 146 cases with single ligature, only 2 cases of retention. The duration of the third stage with the double ligature averaged sixty-four minutes, while with the single it was but twenty-seven minutes. The author believes that a rapid diminution in the size of the placenta, due to the free escape of the intra-placental blood, favors retro-placental hæmorrhage, and consequent complete separation of the placenta, and that it further lessens the obstacle to its escape from the uterus and vagina by the resulting decrease in size. He recommends that double

ligature of the cord should be reserved for cases of twin pregnancy. While we think that there is a question as to the correctness of the author's reasoning on the first point, there can be no doubt as to the advantage of diminishing the size of any body which is to pass the os uteri, and we think that we have ourselves noticed a greater ease of delivery of the placenta in cases in which but one ligature had been applied. The suggestion of Nguyen Khac Can is certainly of value. It should be easy to prevent untidiness by catching all intra-placental blood in a suitable basin, but the determination not to check intra-placental hæmorrhage, of course, implies a careful palpation of the uterus before the cord is cut, and an absolutely positive elimination of the possibility of a twin pregnancy.

PERSONAL.—Dr. Gerald O'Reilly (Trinity '79), M. D. C. M., who has been in active practice in Fergus since 1879, has sold out to his partner, Dr. Armstrong, and is leaving Canada for a trip to the hospitals of England, before settling down again to work. Dr. O'Reilly has enjoyed a large practice both in Fergus and in the County of Wellington, as he has been very popular in all circles. He was President of Fergus Turf Club, and President of St. Patrick's Society. He lately refused the nomination for Centre Wellington for the Local House. Dr. O'Reilly was in charge of the Guelph Hospital for some time as resident, and put in a year as one of the House staff of Toronto General Hospital. Wherever he settles, we wish him every success.

FOR ACUTE RHEUMATISM.—Dr. Loomis recommends the following:—

R—Sodii salicyl ℥ vi.
 Glycerinæ ℥ i.
 Aquæ cinnamomi ℥ vj.

M. S.—A teaspoonful every two hours until tinnitus aurium is produced, then every four to six hours until acute symptoms have abated, then give—

R—Sodii bicarbonatis ℥ iv.—vj.
 In pulv. No. xij. divide.

Sig.—A powder in half a glass of water until the urine is alkaline to test paper. If patient is anemic, begin on soda at once, omitting the salicylate, and give cod liver oil and iron from the start.

CANADIAN MEDICAL ASSOCIATION.—Physicians who are arranging for their summer vacation will be pleased to see that the Canadian Medical Association have arranged to hold their meeting at St. John, N.B., on August 22nd and 23rd next. As a place in which to spend a holiday, the Maritime Provinces can hardly be excelled, and St. John, in August, is said to be almost a paradise.

The gathering promises to be a great success, and those who attend will no doubt feel well repaid for their trip. The expense will be comparatively trifling. No doubt the Secretary will be glad to hear of any who contemplate attending the meeting.

GUAIACOL IN DIABETES.—Dr. Clemens, Frankfort-on-Maine, *La Semaine Médicale, Med. Press*, has obtained excellent results in the treatment of cases of diabetes by means of guaiacol. Doses of from 6 to 10 minims of the drug are administered three times a day in a tablespoonful of milk. Under this treatment, in the majority of cases, a progressive diminution in the glycosuria and polyuria takes place, sometimes even, the sugar entirely disappears, and the general condition of the patients becomes greatly improved.

CANCER OF THE UTERUS.—The following is recommended as a deodorizer, *Rev. Méd.*:

R—Acidi salicylici, gr. vj.
Sodæ salicylat., ʒ iij.
Tr. eucalypti, fl. ʒ vj.
Aq. destil. q.s. ad. ʒ vj.

M. Sig.—Three tablespoonfuls to a pint of water. To be used as an injection every three or four hours.

LEGAL REQUIREMENTS IN SOME OF THE STATES TO PRACTICE MEDICINE.—No legal requirements are necessary for the practice of medicine in Maine, Massachusetts, New Hampshire or Rhode Island. In Arizona, Georgia, Idaho, Indiana, Kansas, Michigan, Nevada, Ohio, South Carolina, Wisconsin and Wyoming, any kind of a diploma from a "chartered medical institution" is a sufficient guarantee of the holder's fitness to practice.

NERVOUS OTITIS.—Seek for dental caries, ulceration of mouth and larynx. Iodide of potassium, quinine, salicylate of soda, antipyrin, phenacetin, have given some good results. The negative electric pole should be tried.

Books and Pamphlets.

THE MEDICAL ANNUAL, 1894. Pp., 680, \$2. Bristol: John Wright & Co. Toronto: Carveth & Co.

This popular work is again to hand. It is considerably enlarged. The arrangement of the subjects is practically the same as in previous years. New remedies are first taken up, and the most important of those which have come into notice during the past year are dealt with, as well as the new application of old remedies.

The contributors are well-known and eminent men of all schools and countries. Among other headings, we notice, Sanitation, New Inventions and Improvements in Pharmacy, Books of the Year, and Therapeutic Gains of 1893.

It is a useful book for the general practitioner.

SYPHILIS IN THE INNOCENT (Syphilis Insontium): Clinically and historically considered with a plan for the legal control of the disease. By L. Duncan Bulkley, A.M., M.D., Physician to the New York Skin and Cancer Hospital; Consulting Physician to the New York Hospital; lately Professor of Dermatology New York Post-Graduate Medical School and Hospital, etc. New York: Bailey & Fairchild. Toronto: Carveth & Co. 1894.

This is the essay to which the College of Physicians awarded the Alvarenza prize for the best memoir on any medical subject. It is the result of ten years' work by one of the ablest men in America. The writer argues that syphilis is not essentially a venereal disease, and that it is too frequently so regarded. He devotes this essay to the disease considered from its non-venereal side. Much of historical interest in connection with syphilis is given, e.g., a table giving the epidemics of syphilis since 1577. It is a work of great merit.

HYDATID DISEASE, VOL. II. By the late John Davies Thomas, M.D., Lond., F.R.C.S., Eng. A collection of papers on Hydatid Disease, edited and arranged by Alfred Austin London, M.D., London, Lecturer on Forensic Medicine, and on Clinical Medicine in the University of Adelaide; Physician to the Adelaide Hospital; Honorary Medical Officer, Adelaide Children's Hospital. Sydney. L. Bruch: 1894.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third series. Vol. fifteen contains the papers read before the College from January, 1893 to December, 1893, inclusive.