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CANADA

MEDICAL JOURNAL

ORIGINAL COMMUNICATIONS.

The present problems in Abdominal Section; illustrated by a successful case of Double Ovariectomy. By Prof. HORATIO R. STORER, M.D., of Boston, Vice President of the American Medical Association, etc., etc.

It has become unnecessary to discuss the question of whether abdominal section, waiving temporarily its performance for other purposes, is, or is not, a justifiable operation in the case of diseased ovaries; the very large percentage of recoveries now obtained by Spencer Wells, Clay, Keith Koeberlé, and others of lesser note, having decided this point authoritatively. It is therefore useless further to collect statistics, save as they may bear upon other and more special problems that are as yet undecided.

We may safely assume that cystic disease of the ovary cannot be cured by medication, and that its alleged relief by chlorate of potash, &c., &c., has been in cases of spurious pregnancy or other error of diagnosis; that tapping, while temporarily relieving, only serves to render the patients' real condition more hazardous, cases to the contrary being exceptional; that ovariectomy is the measure which as the rule ought to be resorted to, oftener in fact than some of its advocates have dared to do, and that the results already thus attained are equal to those of some of the most common operations of surgery. The point that remains to be solved is this: how can the comparatively small mortality now attending this operation be still farther reduced?

As bearing upon some special points involved in the solution of this question, the details of one of my late cases may prove interesting, the more so perhaps to the profession in Canada, from the fact that the patient was sent to me from one of the provinces.

Inasmuch as some of the cases of ovariectomy that are attended by the most fearful complications, recover, "irrespective or in spite of the treatment pursued," many have been inclined to underestimate the question of the relative value of incidental points, and to consider them all of trifling importance. So far from this being the case, I believe that in many of these remarkable instances of recovery, it is just the greater skill of the operator called out by the emergency, and his increased attention to the after treatment, that produce, against probability, as it were, the favourable result. On the other hand, a certain proportion of cases still die; many of them in skillful hands and without complication. This untoward event ought not to be considered, as it too frequently is, the effect of chance or the visitation of Providence, but rather as owing to definite causes, capable of being known, and as capable of being avoided.

Mrs. Dunham, aged 43, was sent to me for operation during the month of Oct. 1867, by my friend Dr. John Berryman of St. John, N. B., by whom she had been tapped some two months previously. She is the mother of six children. About two years ago she first noticed a small tumour in the right iliac region, which had steadily increased in size till the paracentesis already referred to. Patient now very much exhausted from effects of extreme sea-sickness upon the voyage. Upon examination the abdomen was found moderately distended by an obscurely defined mass, filling its central and lower portions and over-lapping each side, from which the abdominal wall could not be distinctly separated by lifting its folds. Throughout the tumour there were indistinct and purely localized centres of fluctuation, giving the idea of a multilocular cyst containing many pockets of dense and tenacious fluid. By digital examination of the vagina, it was found that there were present both cystocoele and a protrusion downward of the posterior portion of the upper vagina, bounding Douglas' fossa; the recto-vaginal septum being unaffected. Through this region there was more distinct fluctuation, giving the impression that there existed an inferior cyst which was very much larger and filled with a more serous fluid than those above it; an unusual occurrence for a polycystic ovary. The menses which were now due not having appeared, it was thought best to defer the operation for a while, and thus to allow, in addition, the restoration of the patient to her usual state of health and an opportunity for special preparatory treatment. Ox gall was therefore ordered, as recommended by Mr. Clay of Manchester, to regulate the bowels, and the mur. tr. of iron, that favourite prescription of Sir James Y. Simpson, as a renal depurant. There had moreover been present an inclination to irritability of the bowels, for which, preliminarily to the ox gall, she was put upon a simple diet and gentle correctives.

Under the above treatment, the patient steadily improved in health; the menses however, did not reappear. It was thought best to wait a while in view of the chance of pregnancy; several instances having now been put upon record where the case has been gravely and even fatally complicated by the unsuspected existence of this condition at an early period before its presence could be determined by the ordinary methods of examination. Upon the other hand, it was possible that the catamenia had been suppressed, as so often occurs, by the sea voyage, or by the sudden and unexpected occurrence of the climacteric, to nearly the ordinary age for which the patient had arrived.

As weeks passed, however, more urgent symptoms began to show themselves. The upper portion of the abdomen rapidly filled, dyspnœa and other signs of pressure became marked, and it was evident that operative measures must at once be resorted to, to save the patient's life. Accordingly, at ten o'clock on the morning of November 20, anæsthesia was induced by sulph. ether conc., there being present Drs. Graves, Lynam, and Hooper, of the United States Marine Hospital,—Wheeler, of Chelsea,—Stone, of Boston,—and Mr. F. G. Jordan, of St. John, a student of Dr. Berryman. The details of the case I take from the notes of my assistant Dr. Stone, and Dr. Wheeler; the latter gentleman, as in my last case of ovariectomy, had charge of the after treatment, and it is but justice to state that the success in both these cases was owing, in a great measure, to his judicious and untiring care.

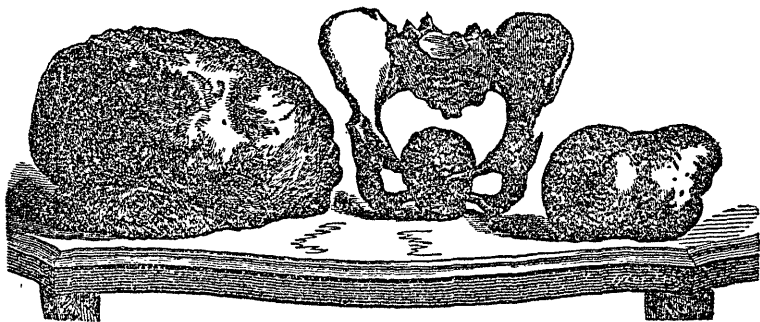
“Precaution having been taken to keep up the circulation by the application of hot bottles to the feet, an exploratory incision was first made about half an inch below the umbilicus, and the same distance to the right of the median line. Upon dividing the integument, fat and superficial fascia, a pocket was opened from which was discharged a small quantity of laudable pus. By careful continuation of the dissection upon a director, the peritoneum was divided. Instead, however, of a free cavity being exposed, it was found that another small pocket had been opened, bounded by walls of adhesion, which entirely surrounded it, save at one point towards the left. Through this a small stream of quite limpid fluid began to empty itself. It was at first feared that the cyst wall might have been pricked, but upon careful examination it was found that the fluid was ascitic, and by enlarging its outlet an amount of some two and a half gallons was drawn off. Exploration now showed that the most extensive adhesions existed throughout the greater portion of the abdomen, in consequence of the subacute peritonitic inflammation occasioned by the tapping at St. John. These adhesions were broken down with extreme difficulty, particularly in the umbilical and

epigastric regions. Attempts were now made to lessen the size of the tumour by puncturing it by a trocar with tubing attachment. It was found, however, that the contents of the cyst were viscid, albuminous, and semi-gelatinous, so tenacious, indeed, as not readily to escape through the canula. It is probable, moreover, from the evidence furnished by Mr. Jordan, who had been present at the tapping, and who had particularly noted the character of the fluid then drawn off, that a major portion of this had been ascitic, and though a cyst or cysts had been punctured, that but a small portion of their contents had been evacuated; enough, however, had exuded into the cavity of the abdomen to have decided the occurrence of the peritonitic attack. The incision was now extended both upwards and downwards, and the tumour lifted out by Prof. Storer and Mr. Jordan, as little traction as possible being exerted, the pedicle of the mass being very broad and short. Dr. Storer's clamp shield was, however, applied without difficulty, and sufficient compression of the pedicle having been made, it was divided with the scissors. Attention was now directed to the general condition of the patient, who had rapidly passed into a state of collapse. The pulse could not be discovered, and the respiration had sunk to about sixteen in a minute. The abdominal flaps were immediately laid together, the clamp shield still remaining in situ, a piece of flannel was placed between the intestines and peritoneal surface, not so much to keep up the heat of the former as to exert pressure upon the bleeding points of the latter, and the attention of all present was turned to efforts at resuscitation. Mustard and hot water, even to the extent of blistering, were applied to the breast, neck, and limbs, and ammonia to the nostrils; the feet and hands were smartly bastinadoed, and at the suggestion of Dr. Lynam, an enema of brandy was administered. These measures were persevered in for an hour and ten minutes before reaction was established. At two o'clock, p.m., the patient being apparently comfortable, the abdominal walls were reopened, the condition of their contents found as they had been left, and that all hæmorrhage had been prevented by the clamp shield and peritoneal compress, although no ligatures had as yet been applied. All present being somewhat exhausted by the exertions they had thus far been compelled to make, opportunity was taken to enjoy a hearty dinner.

"At 2.45, Prof. Storer removed the flannel with which he had enveloped the intestines, and re-examined the pedicle. It was found that though the patient was of a hæmorrhagic diathesis, as shown by an unusual oozing of blood from the abdominal wall during and after its dissection, requiring in several places the application of

perchloride of iron, and though the hypertrophied uterus was much congested, as was also the broad ovarian stump, yet the clamp shield had prevented even a drop of blood from escaping. The pedicle was sutured rather than ligatured, the stitches, ten in number, being passed from side to side, and so closely as to act both as sutures and ligatures, by a modification of Dr. Storer's method of "capping" the pedicle; sufficient space being left between each of the stitches to allow free capillary circulation, and thus to prevent mortification of the extremity. Upon proceeding to examine the condition of the other ovary, it was found that this also was diseased, and occupied the entire cavity of the pelvis, having displaced the uterus upwards, and that its size was that of a child's head at full term. So firmly wedged was it within the pelvis, and so great was the resistance of the promontory of the sacrum from above, that the united strength of Drs. Storer and Hooper was required to dislodge the tumour. The clamp shield being again applied, division was effected as before, and eleven metallic sutures inserted in the T shaped pedicle close to the uterus. This smaller tumour (the left ovary) weighed two and a half pounds; the two, with their contents, weighing thirty-six pounds. The abdominal wound was now closed by thirty double sutures of annealed iron wire, electroplated with silver, introduced by Simpson's hollow needle, and the patient left in Dr. Wheeler's care." (Dr. Stone).

The wood-cut here appended shows the size of the tumours relatively to



each other, and to the normal female pelvis; the "dummy" uterus also exhibited, prepared by Mr. Jordan, serves to represent the hypertrophied condition of the organ and its displacement upwards by the pelvic tumour.

"Thursday morning, 21st Nov.—During the evening and night the patient gradually came up from the shock of the operation, feeling much exhausted in strength. Has slept somewhat during the night at short

intervals; complains of little or no pain in the abdomen. Pulse about 120, and soft. Stomach somewhat irritable; to quiet it she takes small pieces of ice, as well as to relieve the dryness of the throat, though the tongue is moist; catheter used every four hours to empty the bladder. Some distension of the upper abdomen, but not much tenderness. The wound remains dry and looks well.

"Friday 22nd, and Saturday 23rd.—Has remained comfortable in every way and slept sufficiently. Thirst continues, and vomits less. The skin at a good temperature and at times a little flushed with heat. Takes a little brandy; also some gruel made of flour with milk. Some more distension of the abdomen. Pulse less than 100. Is having a dark sero-sanguineous discharge from the vagina with the usual symptoms in the back and limbs of her menstrual periods. Takes once in four hours a suppository of $\frac{1}{2}$ gr. of sulph. of morphia. Alternatés, by mouth, the mur. tr. of iron, 15 drops, with the same quantity of the oil of turpentine, so as to get their combined influence upon the kidneys. The mind cheerful and hopeful as to the result.

"Sunday 24th, Monday 25th, Tuesday 26th.—General appearance continues to improve. The stomach behaves better and retains nourishment. The abdomen continues swollen; slight tenderness on pressure. The wound looks well. Have applied two or three times the saturated tr. of iodine over the whole surface of the abdomen. The urine quite free in quantity. Bowels have moved by the use of soap and water injection.

"Wednesday 27th, Thursday 28th, and Friday 29th.—Continues quite comfortable, sleeps well; takes beef tea in addition to her other diet, with wine and brandy. Pulse only 90. The night previous (Tuesday) she had a slight chill followed by some reaction; the pulse came up to 120, but subsided again. Connected with this last symptom a little abscess or pocket of pus developed near the line of incision, which was liberated by untwisting a few wires. This was the first appearance of any discharge from the wound, nearly two thirds of the upper part having already united by first intention.

"Saturday 30th, Sunday Dec. 1st, Monday 2nd.—The patient continues to improve; the abdomen more flat; quite a free but entirely superficial discharge from the wound. Has had some pain in the bowels, with several dejections of a dark, bilious character. Has required injections of starch with the tr. opii, and port wine in the place of brandy. To-day, (Dec. 2nd), took out all the wire sutures from the wound, save seven at its lower extremity.

"Saturday, Dec. 7th.—For the last week the patient has been grad-

ually gaining in strength. Appetite good, and sleeps well at night. The bowels have been rather troublesome; the discharges being too frequent, dark and liquid, with some pain. Have discontinued the mur. tr. of iron, and continue old port wine in the place of brandy, and a gr. of quinine three times a day. The wound continues to contract and discharge less, there being little or no irritation from the presence of the few remaining wires, which seem to act as a support to the lips of the wound.

“Saturday, Dec. 14th.—The patient steadily gaining; complains less of the bowels. The discharges less frequent, so as to require no opiates. She is able to sit up on a lounge and get into a chair for a short time each day. To-day, have removed the last sutures in the wound, which has now healed, except at one or two points, and have touched these with nitrate of silver.

“Monday, Dec. 30th.—Patient is able to sit up most of the day, and has on her usual dress; walks about the room, and is free from pain. Wound entirely healed, save at a single point, and this is only superficially united. To-day leaves for St. John, and her home; just five weeks and three days from the time of the operation; the husband and wife being a very happy couple.” (Dr. Wheeler.)

Jan. 16th, 1868.—Learned by letter that the patient arrived safely at St. Johns, in good condition, and that her health is rapidly improving.

In the case just related, there were several unpleasant complications:

- I. Both ovaries were involved.
- II. The patient had been tapped, and in consequence, subacute peritonitis had occurred, attended by the formation of very extensive and firm adhesions.
- III. Ascites was largely present.
- IV. The left ovary was so firmly packed beneath the brim of the pelvis that it was extricated with great difficulty, and indeed required much taxis to start it from its socket.
- V. The tumours were practically non-pediculated.
- VI. Very severe collapse occurred during the operation.
- VII. The woman was possibly pregnant, and yet to reward us for taking the responsibility of operating, and of completing the operation when begun, in the face of every apparent probability, the woman made a magnificent convalescence.

A word as to these several points.

I. We find that the implication of both ovaries is no bar to the operation. This has been the experience of other operators. In another case of double ovariectomy that I have had, complicated with a very large

Wolffian cyst that was also removed, recovery was rapid and complete. Only two years since, Scanzoni remarked that he had been able to find but twenty-five cases of double ovariectomy reported.* In Mr. Spencer Wells' first 150 cases, the double operation was required only seven times, and of these patients four recovered. Mr. Wells has shown that the greater frequency of finding both ovaries diseased at autopsies than at vivisections, is owing to the fact that the latter examination is made at a much earlier period; the allowing the disease to persist in one ovary seeming to render its occurrence in the other more probable.†

II. Tapping prior to the operation for removal proves one of the greatest sources of danger; the resulting adhesions increasing the risk of hæmorrhage, of shock and of renewed peritonitis.

III. Ascites is feared by many and by some is considered symptomatic of the disease being malignant. I consider that in itself the serous collection is of little importance, save as tending to obscure the diagnosis, or as depending upon cardiac, renal, or hepatic disease, points usually easily enough made out. If either of the diseases here referred to is present, it is yet not necessarily a bar, since it may be itself merely the result of the pressure of the cyst. I go further than this and will say, contrary to the opinions of most authorities, that cancer of the ovary is also no bar. It is very rare, scores of the cases reported as such from autopsies, being merely aberrant varieties of ordinary cystic disease. Where it is present, the case is amenable to precisely the same rule as governs excision of the carcinomatous mamma, testicle, cervix-uteri, or even the fundus of that organ when the cervix and lower third are unaffected; the ovarian and fundal cases being only somewhat worse than the others. Where without an operation the patient must surely die, and that soon, the chances *all* being against her, and where, with the operation, she may live, she should have, if she desire it, the ghost of a chance, certainly its solid substance, and he is a coward who fails to afford it to her, and seemingly cruel or wickedly jealous if he deny this right or the opportunity to afford it, to others.

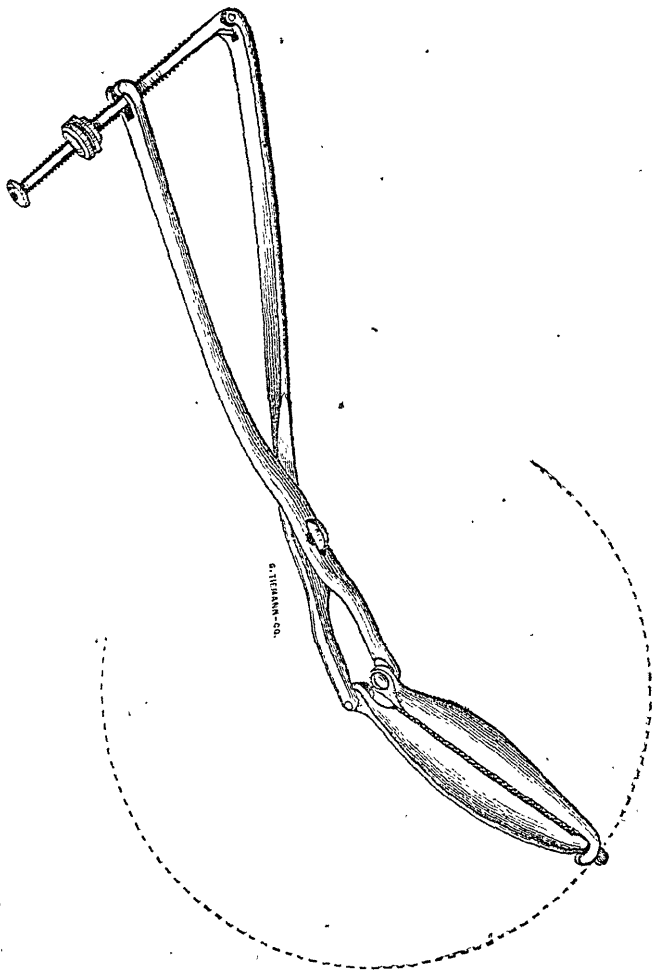
IV. To find the pelvis, after one ovary has been removed, entirely filled by a cyst, the walls of which are extremely thin and delicate at that, is no pleasant discovery. In such a case, however, there is nothing to be done save to manipulate as dexterously as possible, and avoid its rupture. This I believe preferable to tapping from above, or from be-

* Wurzburg Medicinische Zeitschrift, 1865.

† London Medico Chirurgical Transactions, Vol. 1. 1867.

low through the vaginal roof, as is strongly advocated in ordinary cases, by my friend Dr. Noeggerath of New York, and has indeed, in quite a number of instances, been practiced by him.

V. To find that no pedicle exists causes me very little anxiety. To most operators it has proved a very serious matter. I have yet to see



the case, however, and I believe there is none upon record, complicated though it may have been, in which, provided it has been possible to complete the operation, the use of my clamp shield would not have effectually prevented severe primary hæmorrhage, or its subsequent occur-

rence. I know that this is a bold assertion; yet I have no hesitation in resting it upon the capacities of the instrument as already proved in practice, and am willing to guarantee the result, where it is properly applied. I here insert a cut of the instrument, which is very neatly made by Tiemann & Co., of New York, and refer those interested in the subject to papers upon its use that have already been published.*

VI. I believe it best always to endeavour to prevent collapse, by measures resorted to prior to and during the commencement of an operation, for the purpose of keeping the circulation regular, and, by reflex irritation, the general innervation normal. This was attempted in the present instance, and probably lessened the shock, and thus prevented the patient from being lost. As it is, the case goes upon record, as, in its bearing upon the necessity of keeping up efforts for the re-establishment of life till the very last moment, collateral to what is so frequently seen in the successful resuscitation of the still-born foetus. The persistent employment of a combination of stimuli, among which the brandy enema and flagellation of the extremities were pre-eminent, may serve as an example to be followed.

VII. It is undoubtedly a disgraceful thing to operate, as has been done, only to find both ovaries healthy, and the womb containing a foetus. It is nearly as disgraceful, in these days of a closer differential diagnosis, to find that advanced pregnancy, which had been unsuspected, exists, even though it were obscured by an ovarian cyst; for this is a very different thing from performing the section during pregnancy, after the fact of gestation had been ascertained and the reasons for and against the measures employed had been carefully and clearly balanced. In the case now reported, the probabilities regarding pregnancy were weighed and the result showed the wisdom of the course pursued.

In the present instance the menses had been absent for two months, and yet reappeared subsequently to the operation, although the ovaries had both been removed, and the major part of the Fallopian tubes also. I have elsewhere pointed out the physiological importance of phenomena of this character, different as it is from an ordinary hæmorrhagic discharge, with which it is usually confounded. In my last previous case, also successful, I operated purposely during menstruation; all other operators, so far as I am aware, have avoided doing this. The result was as favourable as could have been desired.†

* Transactions of the American Medical Association, Vol. xvii. 1866. p. 107; New York Medical Record, Oct. 16, 1866, p. 385.

† Am. Journal of the Med. Sciences, Jan. 1868, p. 77.

It will be seen that I employed, both upon the pedicles and the abdominal wound, metallic wires instead of silk. This latter material I have discarded for several years, always employing for operations of whatever character, either the wires or acupressure.

Those patients who die during or after ovariectomy are ordinarily carried off by nervous shock, primary or secondary hæmorrhage, or by peritonitis. I attach great importance to the preliminary preparation of the patient, and, as I have already implied, to a careful after-treatment; points upon which I have lately taken occasion to enlarge at a recent special meeting of the New York Academy of Medicine,* before which I had been kindly invited to bring for discussion, my new methods of treating the ovarian stump after excision, both of them successful in practice, to which I have respectively given the names of "Capping" and "Pocketing."† A modification of the former of these measures was employed in the case now reported, and they are not unlikely destined to take precedence of all other methods in practice, as most rational in theory, and it is to be hoped, practically most successful in averting three of the four great dangers to which I have alluded; namely, hæmorrhage; primary and secondary, and peritonitis. I may add perhaps with justice the fourth danger also, as it is ordinarily diagnosticated; for no doubt very many of the cases reported as dead from shock, have in reality perished from thrombosis or embolism, certain causes of which my new methods will tend to prevent.

There is much more regarding this matter of abdominal sections in which I hold peculiar views of my own. Some of these views are to a certain extent at variance with those generally entertained; but I cannot at this time do more than allude to them. There are many physicians who still doubt as to the propriety of ever attempting the removal of the entire uterus from above, an operation which I have now performed five times; all of the cases having been of dire necessity, and the worst one of them all having recovered; ‡ while in the unsuccessfully four primary hæmorrhage, the more usual cause of death was easily and entirely prevented by my clamp shield. There are those who would hold it little short of homicide, that we should venture to remove, in a desperate case of umbilical hernia, the entire sac by elliptical incision. In a case of my own I employed this novel expedient. The patient died, it is true, but union of the abdominal wound by first intention had been obtained, and the death was from extraneous causes.* I mention these cases

* New York Medical Gazette, 28th Dec. 1867. p. 106; New York Medical Record, 15th January, 1868, p. 519.

† Am. Journal of the Med. Sciences, Philadelphia, Jan. 1868.

‡ Ibid, Jan. 1866.

only as bearing upon the general question of abdominal section, and tending to strengthen the hands and cheer the hearts of that great army of the brethren, who, slow to take the responsibility in a doubtful case, are quick and ready to follow a successful precedent. We should not fear, as no doubt many do, the encouragement which the recent grand success of M. Péan in removing the spleen,* will give to Spencer Wells to renew his own brilliant attempts, and still more, that it will lead others less expert to essay their skill, but rather rejoice that a human life, else lost, has been saved, and trust that still others may be also.

PERISCOPIC DEPARTMENT.

Surgey.

CONSIDERATIONS UPON OTORRHOEA, PARTICULARLY IN CHILDREN, AND UPON A NEW METHOD OF TREATMENT.

Communicated to the Imperial Academy of Sciences, April, 1867, by M. BONNAFONT, Corresponding Member of the Academy. Translated from *l'Union Médicale* of July 2d, 1867.

All persons are not equally predisposed to this affection; in general we observe it most frequently in constitutions that are lymphatic, strumous, gouty, etc. There are some exceptions to this rule; thus the affections of the ear are often developed after a cutaneous eruption, as scarlatina and rubeola, more particular after the last, without our being able to give the reasons for this preference.

The age at which this kind of otorrhœa ordinarily manifests itself is from six to ten years, sometimes sooner, but rarely later; it is at this time, therefore, that we should hasten to direct an energetic treatment against the disease, for the simplest piece of negligence, on account of the susceptibility and delicacy of the organs of hearing, may allow the most serious lesions to encroach upon this apparatus. At this age, indeed, it is not the deafness alone that is to be dreaded, but even dumbness as the inevitable result of the loss of hearing. Nearly one-third of the children who are found in the establishments for the deaf and dumb, both in France and in foreign countries, owe their infirmity to nothing but the destruction of the apparatus of the middle ear, by neglected otorrhœas: while it is probable that if these children had been subjected to suitable treatment at the proper time, it would have been successful, at least in a large num-

* New York Medical Record, 16 April, 1866, p. 73.

ber of them, in arresting the progress of the disease, and in preventing thus an infirmity henceforth incurable, which must ever cause grief to the parents' heart.

Prognosis.—The prognosis of this affection is, we think, according to the extent or the seat of lesion; thus the inflammation may occupy the whole surface of the canal, and it may present less of gravity than if it occupied a position even the most limited, in the neighbourhood of the tympanum; in the first case the ear may be for a long time diseased without inducing any disorder of the hearing, while, in the second, it is rare that the tympanic membrane, whether by the continued contact with pus, or by the extension of the inflammation, does not finish by injuring itself, and by compromising, later on, the function of the organ. Besides, another circumstance which renders these ulcerations at the bottom of the canal very much more serious than those which are developed in the regions nearer to the meatus, is this: we know that the glands which secrete the cerumen do not extend beyond the external two-thirds of the canal, and that beyond, the flesh is extremely slight, very red, very sensitive, and applied almost directly upon the bone, from which it is separated only by a very thin layer of the cellular tissue. It follows, from this anatomical disposition, of the greatest importance in auricular pathology, that all that portion of the canal which is provided with glandular tissues may be for a long period diseased, without the subjacent bone being affected; while, in a region lower down, the slightest ulceration of the skin attacks, pretty soon, the periosteum and the bone, if we do not promptly arrest its progress. * * * * *

Treatment.—The first indication to be fulfilled consists in making a careful examination of the canal, in order to ascertain the seat of disease and the degree of its extent. But in general, when we are consulted, it is seldom that the patients, large or small, have not the canal obstructed with matter; it is on this account that we must devote three or four days to these preliminary cases, consisting in cleansing perfectly the canal and in freeing it from all the matters which may conceal the ulcerations; it is for this purpose that I recommend the patient to take, three or four times a-day, ear baths of poppy water, then to make with the same liquid; injections, pretty strong, so that the liquid, in returning upon itself, may bring with it all the foreign matters. * * * * *

So long as there is no suppuration, it is less essential that the injections penetrate into the interior, but the case is different when pus is thrown out from an ulcerated surface, especially if deeply situated. We can easily understand that if, while the meatus is obstructed by the engorgement of tissues, the suppuration accumulating in the lowest portions of

the canal, will compress the tympanum, will cause its laceration, and later on, its destruction, as well as that of the apparatus of the little bones.

It is to avoid a similar accident, that I have employed for many years small dilating canulas of caoutchouc. Whatever may be the narrowing of the canal, we may always cause a little sound, previously coated with cerate, to glide in; and when this has been introduced, we can easily cause others of larger size to penetrate. But before replacing a sound by another, we should take advantage of the opening already made to use injections, and to relieve, as much as possible, the bottom of the canal of the purulent matters which may be found there. * * * *

When the discharge resists our endeavours and threatens to pass into the chronic form, the local treatment should be conducted in the most energetic manner, and by a succession of the means I have indicated. We must always commence by satisfying ourselves, by the use of the otoscope, of the region which the lesions occupy and whence the pus proceeds; when we have recognized the diseased point, we should at once cauterize with a small crayon of nit. silver, such as I use. These little cauterizations, made with care, cause very little, if any pain, and can be repeated every second day.

In the interval we may use astringent and styptic injections, with acetate of lead, of the strength of 1 gramme to 100 grammes of water, sulphate of zinc of the same strength, or, which is excellent, sulphate of alumina, of the strength of 2, 4, and even 6 grammes to the 100 grammes of the liquid. This last is what I most frequently employ, especially since having tried it in the hospitals in gonorrhœa, it has given me very satisfactory results.

When this malady appears in a strumous subject, or in a lymphatic constitution, it is very evident that, in this case we should unite the local treatment with an internal medication, the energy and activity of which must be proportioned to the degree of the lymphatic character of the individual.

The local treatment, without being neglected, should be conducted with prudence, and should follow the modifications produced by the constitutional treatment. If on the contrary, otorrhœa be engrafted upon a sanguineous constitution, Mr. Kramer counsels, with reason, that we should not attend to the general condition, but should treat the case by purely local means.

In order that medication should be applied in a rational manner, it is necessary to see the parts affected; for it is not an indifferent thing to cauterize healthy tissue, the tympanum particularly. It is for the purpose

of facilitating this examination for a large number of physicians, that I have caused to be made a novel otoscope, very simple, which does not require the assistance of any lamp, and whose shape renders it very portable. This instrument will be found of equally felicitous application in the examination of other organic lesions, such as those of the neck of the uterus, etc.

This instrument has the great advantage of only occupying one hand, of allowing every kind of inclination to be given to the light of illuminating the bottom of canals very obliquely situated, by directing into it a very intense luminous ray.

This otoscope is composed of two tubes: the vertical one, which serves as a handle, contains a small wax candle, such as is used to light up the little altars in the month of May. This tube is pierced at the bottom with many apertures in order to allow the passage of air, which is necessary to nourish the light. The other tube, forming the principal body of the instrument, presents at its superior part a large opening corresponding to the axis of the vertical tube, and by which the flame of the candle escapes. Its posterior extremity is guarded by a small reflecting mirror in platinum, and the anterior by a bi-convex lens, the power refraction of which has been calculated so as to make a very great concentration of the flame at the greatest possible distance, in order to fulfil the two following conditions: 1. To cause the greatest possible light to penetrate to the bottom of the auditory canal, notwithstanding its narrowness; 2. Then to leave between the illuminated point and the instrument sufficient space to allow not only of seeing well, but also, with the other hand, to perform in the canal or on the tympanum any operation that may be deemed necessary. This tube may be lengthened or shortened, in order to give to the luminous ray a greater or less concentration, according to the cavities we desire to illumine.

The tubes may be taken apart, and one made to enclose the other, the instrument then is very compact, and very portable.—*Southern Journal of Medical Sciences.*

ST. GEORGE'S HOSPITAL.

CASE OF STONE IN THE BLADDER: LITHOTOMY BY A NEW OPERATION.

(Under the care of Mr. HENRY LEE.)

Mr. Henry Lee recently performed and described a new operation, or rather a modification of the lateral operation for lithotomy. The patient was a boy three years of age, who had at one time had retention of urine, and afterwards passed his urine very frequently, and always with pain. The first time he was sounded, Mr. Lee felt a stone; but subsequently

he and other surgeons had sounded without being able to detect anything in the bladder. A week ago, under chloroform, a calculus was again felt; and as the symptoms continued unabated, the operation was determined upon.

After an ordinary grooved staff had been introduced, the operation performed consisted of a straight incision in the median line, extending a distance of a little more than the posterior half of the perinæum between the scrotum and anus, stopping a couple of lines in front of the opening of the bowel. From this point, the incision through the skin was continued outward and backward so as to embrace one-fourth of the circumference of the bowel, at the angle formed by these two portions of the incision. The scalpel was then introduced in the median line, with its back towards the rectum. It was then passed forward into the groove of the staff, guided by the finger in the rectum. As soon as it had entered the membranous portion of the urethra, it was withdrawn, and a curved bistoury with a projecting probe-point introduced. The probe-point was then made to slide along the groove into the bladder, the edge of the knife being held to the operator's right side, as in Buchanan's operation. The heel of the knife was then made to describe a portion of a circle corresponding to the external incision; while the point, while being withdrawn, was moved little from the median plane. Mr. Lee mentioned that in this way all the advantages of a free external incision were obtained, with a very small opening into the bladder. The plan had, moreover, the advantage of ensuring that the point of the knife had entered the bladder. It was, he thought, an operation the simplest in conception, the easiest in execution, and the least liable to be followed by any untoward accident, of all the modifications of the lateral operations for lithotomy. The groove in the staff was reached with great certainty, being felt by the finger in the rectum. The rectum was secured from danger by the edge of the bistoury being directed laterally. But the greatest advantage, especially in operating upon children, he considered to be the certainty of the incision extending into the prostate gland. It was well known that accidents had occasionally occurred from the prostate not being incised. When this had happened, the finger introduced had sometimes pushed the prostate before it; and in this way the prostate had been detached from the membranous portion of the urethra, and pressed towards or into the bladder, so that a cavity was formed without the bladder having been opened.

In the present instance, a very small stone came away at once between the blades of the forceps, together with some very small fragment which had apparently lodged in the urethra. The stone was so small, that it was doubted at first whether it was sufficiently large to give the sensa-

tion experienced when the sound had been used. The cavity of the bladder was, however, carefully explored, and nothing further detected. The symptoms had all subsided on the fifth day after the operation. *British Medical Journal*.

EPISTAXIS, AND THE MEANS OF ARRESTING IT.

By JOHN THOMPSON, M. D., F. R. C. S., Bideford.

Hæmorrhage from the nose is most frequent in youth and advanced age; it recurs more often in the former, but is more severe and threatening to life in the latter. I have seen an old man approaching four score lose several pints of blood at one time; and on several occasions elderly people under my care have bled more than a pint at once. The arteries being rigid, atheromatous, and feebly contractile, will explain the severity of the hæmorrhages of the aged. It is generally assumed that, in the young, plethora and sthenia accompany the hæmorrhage. This may be so in many; but I am convinced that, in a large number, if not in the majority, the opposite conditions exist. A florid complexion is not always indicative of plethora, still less of sthenia. I have at this time under treatment a respectable female approaching to middle age, and a resident in the country, who suffers from vicarious epistaxis, whose ruddy cheeks would render her the subject of remark; and yet her system is feeble, and the strongest chalybeates suit her better than salines and evacnants. Again, as the periods of active growth and fast decay are equally the periods of weakness and the seasons of the hæmorrhages, we have a general presumption in favour of the argument for debility.

The ordinary means employed for staying a profuse epistaxis need not be dwelt on; but I will add, that keeping the patient's arms perpendicular will sometimes be sufficient of itself, and it always assists the action of the cold douche and similarly acting agents, the reason of which is obvious.

Many years since I was on a visit in a country neighbourhood, where I was asked to see a gentleman advancing in age who had lost an alarming quantity of blood from his nose, and all the ordinary means failed to arrest the flow. Plugging in front simply prevented the discharge forwards; it made its course backwards into the throat instead. I took a medium sized gum elastic catheter, without stilet, warmed and washed it, then passed it along the floor of my own nostril to the throat, and thus ascertained the length of the passage, which I marked on the instrument. Next I passed it back through the nostril of the patient, and, when I knew the end must have reached his throat, I opened his mouth and seized with

a polype forceps the end of the catheter, which I then drew to his mouth, and tied to it a strong ligature with a pledget of lint attached. By drawing the catheter out through the nostril, the lint was fixed at the posterior nares, and the bleeding arrested. This might have been done by the instrument known as Belloq's, but it was not at hand, and very probably would not be away from town or hospital in most cases; but a catheter, used in the way I have named, answers so well, and is so easily extemporised, that the more expensive and elaborate instrument can be dispensed with. It seems, also, to me that drawing the end of the catheter to the mouth by means of the forceps, is a better plan than threading the catheter with a ligature and passing it thus armed through the nostril on to the throat, there to be reached with the fingers.

But, however practised, the presence of the pledget at the posterior nares is very annoying and even distressing to a patient, so that it is desirable to avoid it when practicable; and I have found the following method so successful, that I venture to suggest its adoption as a substitute. Strip off a piece of lint about the width of a finger, and twice the length of the nasal passage; double this, and place the bowl end of a director in the fold that marks the middle; then pass the director thus covered along the floor of the nostril till it reaches the throat, lift it somewhat, and then withdraw the director, giving it a wriggling movement in its passage, so as to leave the lint ruffled and loosely distending the passage. The result is, that the blood rapidly permeates and distends the lint, a large coagulum is formed, and the bleeding is completely arrested. This is attended with far less inconvenience to the patient than even ordinary plugging in front, is vastly more effective, and, should it turn out to be less reliable than plugging the nostril behind, is free from the suffering which must attend on the lodgment of a large foreign body over the soft palate, which, in the case of the patient whose case I have named, was scarcely endurable. *British Medical Journal.*

PUNCTURE OF THE BLADDER ABOVE THE PUBIS.

By JOHN H. MACKIE, M.D., of New Bedford.

Seeing in your Journal of this week a successful case of puncture of the bladder through the rectum, I am induced to report a successful case of puncture of the bladder above the pubis, that has just occurred in my own practice. Sunday, Oct. 13th, at 9 o'clock, P.M., I was invited by my friend Dr. C. L. Swasey, of this city, to see with him a patient suffering under retention of urine from an impassable stricture. The patient, a Scotchman, aged about 40, was a man of good constitution.

and habits, but had been indulging in a slight excess of drinking. At the time I saw him, about thirty hours had elapsed since he passed urine. Dr. S. and myself tried in vain to pass a catheter, and as the bladder was enormously distended, we decided to puncture. Believing that the bladder had risen so high in the abdomen as to preclude all danger of wounding the peritoneum, I plunged a medium sized trocar and canula into the bladder, immediately above the symphysis pubis. Before the urine had ceased flowing through the canula, I passed into the bladder, through the canula, a small gum catheter, withdrawing the canula over it, and leaving the catheter in the bladder, placed the patient on his side, gave him a good dose of morphine, and left him for the night. The next morning I found him perfectly free from pain; and in the course of the day he passed urine by the urethra. The next morning, Oct. 15th, I removed the catheter, and yesterday morning, 16th inst., found him "up and dressed." To-day, the external, and apparently the internal, wounds have healed, he passes urine naturally, and is discharged, with a recommendation to have his stricture treated by dilatation. During the case, no medicine was given, except morphine. He was kept in a recumbent posture, and allowed to take nothing except "meal gruel," flaxseed tea, and cold water.—*Boston Medical and Surgical Journal*.

ON THE TREATMENT OF ENLARGED GLANDS, ETC.

BY INJECTIONS OF SOLUTIONS OF IODINE AND IODIDE OF POTASSIUM THROUGH A PERFORATED NEEDLE.

By WILLIAM MARTIN COATES, M.R.C.S., Surgeon to the Salisbury Infirmary.

In the number of the "Medical Times and Gazette" of July 27, 1867, there appeared a short and well-written communication by Dr. Marston, of Devizes, entitled "An Hypertrophied Cervical Gland treated by Injections of Iodine," and in the latter part of the paper is a suggestion that other tumours and enlarged glands, in cases in which the skin has remained unbroken, might be treated successfully in the same manner.

This idea has been familiar to me for upwards of two years, and during 1866 and the present year I have tested it largely, with results of a most important nature and extent. Not only so, but I have succeeded in curing strumous and cold or chronic abscesses without leaving scars, psoas abscess, bronchoceles (cystic and solid), ganglia, enlarged bursæ (including housemaid's knee), thick nævi, strumous disease of joints, an encysted tumour; and in one remarkable case of strumous abscesses,

strumous disease of, and suppuration in, the middle joint of the forefinger, great thickening of the first metatarsal bone, and of the fifth metacarpal bone, every vestige of disease disappeared under this treatment, aided by iodide of potassium, cod-liver oil, and iron, administered internally. The injections were thrown into the midst of each locally affected part in June, 1866. The child is perfectly well, and what is very interesting in this case is, that there is perfect motion of the one diseased and suppurating joint of the forefinger.

In July, 1866, I injected into masses of enlarged glands of the neck, undiluted compound tincture of iodine in the Salisbury Infirmary in two patients, with the effect of dissipating the enlargement in one case and of diminishing it in the other. In neither of these cases was there ulceration. I also injected, in August, 1866, the same preparation into an enlarged post-cervical gland of a gentleman who applied to me for strumous abscesses under both jaws. The gland was of the size of a walnut. It disappeared without suppuration.

In February, 1867, I had the following case under my care in the Salisbury Infirmary:—

A dark strumous-looking boy applied with a mass of diseased glands under the base of the lower jaw, on the left side, with an unhealthy ulcer of the size of a crown-piece. I directed a drachm of the compound tincture of iodine to be injected into the midst of the mass by means of Wood's syringe. This was done by the House-Surgeon. The boy was brought to me two days afterwards, as the swelling and pain of the diseased part were great. A week's poulticing relieved the tension; the glands gradually diminished in size, the ulcer took on healthy action; and in eight weeks it had cicatrised, and now the boy is quite well.

As I am preparing to publish at length the results of this treatment, and have abstained thus long with the view that any paper or treatise I may write may be as complete as possible, I will merely add that I anticipate success in some other diseases in which I have had no opportunity of testing the treatment. I will mention two—ovarian dropsy, and such fibroid tumours of the uterus as can be easily reached by a perforated needle.

It will be seen by reference to the "Lancet" of March 3, 1866, page 225, that I have already published the success of this treatment in "spina bifida, ranula and glandular tumour of the mamma with cysts." Several of my medical friends are trying this my mode of treatment, and I am sanguine of having at my disposal, at no distant period, a large mass of evidence on this important subject.—*Med. Times and Gazette.*

REDUCTION OF HERNIA BY ADMINISTRATION OF COFFEE.

That coffee has a very much more powerful influence on the peristaltic movement of the intestine than tea is pretty generally known; but we doubt whether this action has hitherto been brought into play in the reduction of hernia. The following instance in which coffee was accidentally and successfully employed for this purpose will therefore interest our readers: A man who had for some years a reducible hernia, while over-exerting himself converted his hernia into an irreducible one. On being seen by Dr. A. Bourillon, who describes the case, he was suffering from colic and nausea, the pulse was small, and a round, hard tumour, giving a tympanitic sound on percussion, existed in the right groin. The relations of this showed that it was a strangulated right inguinal hernia. The taxis was tried in vain for hours. Applications of belladonna, tobacco, salt, etc., were also unsuccessfully tried. The next day the condition of things was worse, and all efforts to reduce the hernia were fruitless. It was therefore determined to operate on the following day, and the patient was meanwhile ordered to have infusion of coffee (108 grammes of freshly roasted and ground coffee to five cups of boiling water). On coming to operate in the morning, Dr. Bourillon found that the hernia was reduced. According to the patient's own account, the coffee having produced movement of the intestine, seemed to extend the contraction to the hernial sac, which passed inwards suddenly with a distinct *gargouillement* — *Ranking's Abstract*, July, '67,

ON THE TREATMENT OF OZÆNA.

By Christopher Heath, F. R. C. S.

In the *Lancet*, 1864, Dr. Thudichum called attention to a novel method of cleaning the nasal cavities in case of offensive discharge, depending upon the anatomical fact that when the mouth is open the soft palate so effectually shuts off the posterior nares that fluid will pass from one nostril to the other behind the septum, without descending into the pharynx. Having during the last two years repeatedly availed myself of this method of treating disease of the nasal cavities, I venture to lay my experience of it before the profession, since its merits are as yet, I believe, scarcely appreciated.

Dr. Thudichum, himself, I believe, interfered much with the popularization of his plan by the elaborate details into which he entered respecting the fluids to be used, and the complicated and expensive apparatus he recommended to be employed. My experience does not coincide with that of Dr. Thudichum as regards the irritating effect to the

Schneiderian membrane of pure water ; at least, when warmed. Cold water, no doubt, is irritating, as all bathers know, but I never found tepid water cause irritation, even when allowed to run for several minutes. Since cleanliness is the first object of treatment, it is important that patients should have no difficulty placed in the way of the free use of simple water, chemical applications playing but a secondary part in the treatment.

With regard to apparatus for a patient's use, simplicity is of the greatest importance. Dr. Thudichum's apparatus consists of a loaded foot, a brass rod thirty inches high, carrying an arm and ring, in which is cemented a high cylindrical glass vessel, resembling in shape the glass shade of a candle lamp, and capable of holding two pints of fluid. To this a stop-cock and tube are fitted, with a perforated nozzle to go into the nostril. This apparatus is made by Weiss, and is, of course, expensive, and besides, the glass is liable to fracture. Small portable India-rubber reservoirs, with tube attached, have been made to supersede this, by Mathews and others ; but the form of tube which I have always employed is by far the simplest, since it can be adapted to any bedroom ewer ; and the expense being trifling, each patient can be provided with a tube, so as to employ it daily.

The apparatus I employ is simply a stout India-rubber tube five or six feet long, with a perforated metal weight at one end, so grooved that water can pass through it when standing on a flat surface. At the other end is an ordinary gum-elastic enema nozzle, which may be perforated with more than one hole if preferred. The whole arrangement was contrived by Dr. Rasch, as a vaginal douche, and described by him in the *Obstetrical Transactions*. For hospital out-patients, I have more than once contrived a very effective instrument out of an old gas-pipe and a piece of sheet lead, but the entire tube as figured below may be bought for five shillings, of Lewis, of the City road, or of Coxeter, Grafton street.

An ordinary ewer being filled with tepid water, the weighted end is dropped into it, and the tube "payed in" for two or three feet. The ewer being then raised upon a chest of drawers, or some convenient elevation, the patient squeezes the tube in the water, and draws it over the lip of the ewer, when, being converted into a siphon, the water immediately begins to flow along it. Perfect control can be exercised over the water, by the pressure of the finger and thumb, whilst the patient places his head over a basin and inserts the nozzle into his nostril. On permitting the flow of the water, a stream is immediately established between the nostrils so long as the mouth is kept open ; and the current can be reversed, arrested, or diminished with the greatest readiness.

The immediate relief to both the patient and his friends by simply washing out the nostrils in this manner, in a case of ozæna, is very remarkable. Not long since a young woman suffering from this affection told me that she had lost a situation on account of the offensive odour she exhaled, and begged for a certificate that she would be no longer offensive to others. In this case, on the first use of the tube, enormous pellets of stinking matter came away; and by the subsequent use of a disinfecting lotion she was rendered perfectly comfortable.

The simplest disinfectant is the permanganate of potash; and, in mild cases, this will alone often effect a cure. More active chemical solutions can be employed in suitable cases; and it is by no means necessary to employ large quantities of these, since, as pointed out by Dr. Rasch, by compressing the end of the tube whilst full of water, it can be transferred to a small vessel holding the lotion, and will still act as a siphon.

In addition to frequent washing of the nostrils, I have employed with advantage in cases of ozæna, the use of tannin as a snuff, taking the hint from a paper on "on Nasal Polypus," by Mr. Bryant; but a more elegant and perhaps satisfactory way of using the agent is that employed by Mr. Davey of Romford—viz., in solution with glycerine (tannin, one or two grains; glycerine, one fluid drachm; water, one fluid ounce), and blown into the nostril with a spray producer. This has the advantage of more fully spreading through the cavity, and the method may be advantageously employed in those cases of polypus nasi in which the nostril is so completely blocked that the patient cannot snuff up, an instance of which lately came under my notice.

Medicinal constitutional treatment will be required in many cases of ozæna in order to effect a cure; but careful attention to diet and hygienic measures must not be neglected, especially in children of a strumous character. The topical application of nitrate of silver, etc., may be occasionally requisite when ulceration is clearly visible, and ointments may be applied on a camel-hair brush with advantage, near the nasal orifices, so as to prevent caking of the mucus during sleep. In order to examine the interior of the nostril, a good light is necessary either from the sun or a lamp, when, if the rays are properly directed, and the nostril is held open with a director or small spatula, or, if preferred, with a bivalve ear-speculum previously warmed, a good view of the interior will be obtained. I have employed the endoscope in order to examine the nose, and in one instance—a gentleman whom I saw in consultation with Dr. Easton some months back—the nostril had been so dilated by the long continued manipulations of the patient that I was able to use the endoscopic tube ordinarily employed for the examination of the rectum.

This patient derived great comfort from the use of the tube to wash out the nostril, but did not continue under treatment long enough for a cure to be effected.—*Lancet*.

Medicine.

INFANTILE CONVULSIONS.

BY JOHN DICKSON, M. D., Read before the Baltimore Medical Association.

Of all the maladies of infancy, I know of none more serious, or embarrassing to treat, than convulsions. We are summoned in great haste, and arrive out of breath, and find a painful scene of dismay and confusion which requires our utmost tact and composure to lull. We never get *used* to spasms in the sense in which we may become stoically or philosophically calm. The malady is too grave and sudden in its effects, and our responsibility too serious for that. We all know that two or three minutes of tonic spasm, or a few hours of clonic, may destroy life, and how much depends upon the prompt and judicious action of the physician, both for the child's safety and his own reputation! Unless the case occurs in our own family, or has been attended with premonitory symptoms, we rarely see a spasm in the tonic stage. The violent and sustained contraction of the respiratory muscle stops the breathing, and death results in a few minutes from asphyxia, as in the first stage of epileptic fits, or in fatal cases of laryngismus stridulus. This, fortunately, is a rare occurrence. We generally find the state, which soon succeeds, of alternate retraction and relaxation, either general or partial; and sometimes confined to very few muscles, as those of the face or hand. In severe cases there is violent jerking of the limbs, abduction of the thumbs covered by the contracted fingers, staring or rolling, insensible eyes, with pupils either contracted or dilated, or there is strabismus in the course of the spasm; the head is drawn backward or forward from the beginning, or it is twisted in rotatory movements; the respiration is quick and irregular, producing a sound of choking as distressing to hear as the contracted, livid face is to witness. When clonic spasm continues some hours, and the rapid contraction and relaxation prevent the free egress of the carbonized air from within the lungs, or the admission of enough pure air to renew the blood, both circulation and respiration are arrested, and death must follow.

Even when this is not the immediate result of the spasm, in many instances it occurs within a short time after it subsides, because these vital functions have been so seriously impaired as to preclude respiration, and

the patient sinks from the shock—as we have heard mothers expressly say “they were struck with death from the beginning of the attack.”

But, happily, this is not the most common course of convulsions. There is oftener a gradual subsidence of the fit. The spasmodic movements become slower and cease, the respiration is free, and a general calm succeeds. The patient either wakes to consciousness, or falls into a comatose, or, it may be, natural sleep, after which there may or may not be a recurrence of the spasms. Such recurrences are very common in spite of our best efforts to prevent them, but it is gratifying to know that the danger is not proportionally increased by their frequency. I have seen children have six or seven in the course of the day, and on the following day present no unfavourable symptom or spasm ever afterwards.

Partial spasms present such a variety of forms that I shall not attempt to speak of more than one or two. They may be confined to the superficial muscles only, and to a few of these, and in such cases, the senses remain intact. I have seen the eye, mouth and hand of one side jerking, while the sensibility of the child was perfect; and it would ask for milk and drink it, attempting to hold the cup with the convulsed hand and steadying it with the other. Such are the sequelæ of the more severe attacks, and are easily excited in children so predisposed. Sometimes the muscles of the neck are alone affected, and cause rotation or flexion of the head forward or backward. Indeed, single muscles, as well as sets of muscles, in almost every part of the body, may be convulsed, or exhibit movements under peculiar excitement, nervous or fibrile, which closely resemble spasm, and are at times mistaken for such. Certain organs alone may be affected, as the larynx or glottis, and we have a very formidable trouble in laryngismus stridulus. A child may be seized without any premonitory symptoms of dangerous import, with apparent suffocation. His breathing is suspended, his head thrown back, face and lips livid, and, in a few seconds, the spasm yielding, respiration follows, and a sudden gasp for breath, so urgent as to produce a crowing sound; and the breathing goes on naturally. But there are cases so violent from the repetition of these spasms, as to destroy life during the paroxysm, or lead to general convulsions and coma. Marshall Hall calls this affection “an excitation of the true spinal or excito-motory system.” It originates in the trifacial in teething; in the pneumogastric in over or improperly fed infants; in the spinal nerves in constipation, intestinal disorder or catharsis. These act through the medium of the spinal marrow, and the inferior or recurrent laryngeal, the constrictor of the larynx, and the intercostals and diaphragmatic, the motors of respiration.” We can judge from this that a great variety of causes, as in general

convulsions, may produce this form of spasm. Dr. West mentions a case in a child only ten weeks old, from improper feeding; another, of nineteen months, from sudden suppression of chronic diarrhoea; another, of two and a half years, from cerebral congestion following constipation; another, of nine months, during the course of chronic hydrocephalus; and in another, who died at the age of two months, it appeared as a transitory symptom during a series of convulsive attacks, for which no cause could be assigned during life, and which left no traces that could be detected after death.

The obscurity of origin and absence of pathological indications often throw a veil of mystery over cases of convulsion, which the clearest sighted of us cannot penetrate. We know that hereditary influence is the most frequent predisposing cause, that eclampsia in the mother before parturition, or much further back when she was herself a child, is apt to be followed by the same tendency in the offspring; though it by no means follows so often as to establish it as a rule.

A remarkable illustration of hereditary influence is quoted by Trousseau from a thesis of Dr. Duclos of Tours. The case is that of a woman, thirty-four years of age, who had had frequent attacks of eclampsia up to the age of seven. These had left behind slight deviation of the mouth and ptosis of the left upper eyelid. This woman had ten children, who all had convulsions; six had died, five in the first two years, and one when three years old. Three months previously, she had a first attack, which lasted about ten minutes, and which her mother ascribed to her having given the breast to the child immediately after a fit of passion, as the convulsion occurred on the ensuing day. Death took place three months afterward, from cerebro-meningitis.

Loss of blood, whether in direct hæmorrhage, venesection, diarrhoea, or hypercatharsis, strongly predisposes to convulsions. Insufficient nourishment and exhaustion, from whatever cause, have the same effect. Hippocrates' observation that the "blood is the moderator of the nerves," corresponds with the present physiological law, "that in proportion as the nutritive and vegetative functions are feeble and languishing, nervous phenomena are mobile, exalted and irregular." The sensitive brain, with its spirit-like nerves pervading every part of the organism, must be supported by the vascular system, as the string and wind instruments of an orchestra combine; the measured wave sounds of the latter, giving volume and tone to the tender strains of the former, without which it would be only a flutter of distracting discord. The iron of the blood is as much a fundamental base in toning the system, as the brass instruments are in sustained musical harmony. It may be upon this theory

that Chapman uses ice bags along the spine in so many affections where nervous symptoms predominate. "He considers that ice applied along the spine increases the general circulation, stops the cramp of voluntary and involuntary muscles, proves an effective remedy in epilepsy and other convulsive affections, cures sea-sickness, restrains the sickness of pregnancy, arrests diarrhoea, recovers patients from the cold stage of cholera, and, finally, promotes menstruation. On the other hand, heat along the spine lessens the general circulation, overcomes congestion in all parts of the body, lessens fever, restrains hæmorrhage and lessens or arrests the menstrual flow." If by exciting or depressing the spinal cord, by heat or cold, such remarkable effects can be produced upon the circulatory system, we can readily see how disorders of the latter may prove disastrous to the nervous system. To work out this would be very interesting, but would require more time than I can give it. The fact is, that every thing that impedes or arrests healthy circulation, or impairs the quality or quantity of the blood, may tend to bring on convulsions, and may be ranked among the predisposing causes. The exciting causes of convulsions are very numerous, and upon them, when we can discover them, we base our immediate treatment of an attack. When arising from indigestion, how often have we cut short the spasm by an emetic or enema, when nature herself has not done the work for us, which she frequently does, and when constipation is the cause by relaxing the sphincter and evacuating the loaded intestines. But these measures often fail, and in spite of the inevitable warm bath and counter-irritation, which the child's friends have applied before our arrival, the convulsion goes on unabated; and if we do not arrest it, the child may die in the fit or from the supervening coma. Almost all the antispasmodics have been used for this purpose, and some of them with good effect at times, but no agent is so powerful or requires more skill in administering than chloroform. Some bear it very badly, and we discover the flagging of the pulse or the stertor of the breathing very soon after its application, and we must desist before any good can be done by it. In other cases its use may be kept up for a long time with no bad effects, and the convulsive action controlled. In severe cases I have seen the chloroform used freely for several hours, and the child recovered perfectly, when without it the paroxysm would have undoubtedly exhausted the nervous system, or produced cerebro-meningitis, or effusion and resulting paralysis. Such are often the results of convulsions, besides deformities from rupture of muscles, squinting, nervous excitability, epilepsy, etc., though by no means occurring in a large proportion of cases. In some children convulsions are easily excited and readily controlled, and the

agent which I have found most valuable for this purpose is bromide of potassium. There is still a good deal of skepticism on this point, but I think where it has been used and persisted in, there is no doubt of its efficacy in preventing and subduing nervous excitability. I have given it, when the convulsive tendency was the result of impoverished blood from previous disease, in conjunction with wine and beef essence, with the happiest effect.

Of the effect of ice to the spine I have no testimony of my own. Dr. Edmunds, in the *Medical Times* of March 12th, 1864, after relating a case of spasm in a woman which was perfectly relieved by this means, says: "I had seen Dr. Chapman's brochure on the subject of his discovery, and also his paper in the *Medical Times and Gazette*, but thought the idea too pretty to be anything more than a plausible theory, until my own child being in great danger from an obstinate laryngismus, connected with dentition, I tried the ice bag to the cervico-dorsal portion of the spine, at the suggestion of Dr. Ramskill, and it has certainly done more to keep off the strangling attacks than anything else.

Lancing the gums when the convulsions occur during dentition, sometimes produces immediate relief, and, if they occur during that period, it should be our first duty.

Convulsions which take place at the outset of fevers, from the first impression of the poison upon the system, are not as serious as those which come on towards the close, and seldom require special treatment. It is a disputed point whether the prognosis from such is favourable or not. Worms, sunstroke, extremes of temperature, blows upon the head, sudden fright, severe burns, and local irritation of various kinds, are among the exciting causes of convulsions, and indicate the course of treatment. Calomel has been given very largely in convulsions, as a purgative, anthelmintic and absorbent. We must bear in mind its destructive tendency, and have a distinct purpose in view, the accomplishment of which is paramount to the risk of using such a depleting agent. If we give it to promote absorption of effused serum in the brain we may obviate its injurious effects and increase its efficiency by taking especial pains to nourish and support the general system at the same time, with all the means the patient will bear.

This plan was successful in my own little girl, who was two and a half years old when she was attacked with a violent convulsion, after a day or two of gastric irritation, from which she seemed to be recovering, when, without any warning, she was seized with it, and, in spite of chloroform and everything else we could do for her, it lasted five and a half hours. The right side was most affected, and, after the convulsion, remained

paralyzed for several days, but recovered under the use of small doses of calomel combined with bromide of potassium, and wine, milk, and beef essence. There was a convulsive state for some weeks afterward, which seemed to be controlled by the bromide, and partial convulsions occurred without loss of consciousness, for some days after her recovery from the comatose condition which immediately followed the convulsion. The paralysis left the foot first and she could walk well for some days before she could hold anything in her hand, but that gradually regained its use, and lastly, her tongue, which had remained silent for four weeks, began to liberate itself, in monosyllables at first, and she slowly recovered her vocabulary, as if she had never talked before. This case, which I had hoped to give more in detail, was one of intense interest and anxiety to me, and the care and responsibility of the treatment was most kindly and faithfully shared by our worthy President, (Dr. Williams). She is held up in our neighbourhood as a triumph of medical skill, and an encouragement to parents, as well as doctors, to hope for the recovery of their little ones under the most discouraging circumstances.

IODIDE OF POTASSIUM IN THE TREATMENT OF CACHEXIÆ AND OTHER DISEASED CONDITIONS.

BY SIR HENRY COOPER, M.D., F.R.C.P., Senior Physician to the Hull General Infirmary.

Few drugs have been more thoroughly tested by the medical man within the last thirty-five years than iodide of potassium; and we might reasonably have concluded that its uses and modes of application were definitely known to the profession. Yet some new applications have recently been made of it which give us further insight into its therapeutic power, and particularly as regards the dose and combination. Of these I propose in this communication to give a few cases, and to attempt something of a generalization.

From its containing so large a proportion of iodine, the iodine was at first considered to be an irritant of the capillary circulation; and it was accordingly employed, locally or generally, to remove thickened structure and homologous deposits, particularly in glandular and fibro-membraneous tissues. It was soon found, however, that important general results followed its use in the numerous and intractable class of chronic cachectic ailments, the sequelæ of past acute diseases, or the manifestation of hereditary taint. Thus chronic syphilitic and rheumatic diseases were found to be under its control; and it was hastily inferred that the remedy would be equally effectual in other cachexiæ. Hence it came to

be, in combination with decoctum sarsæ, a too ready refuge in lingering, obstinate, and obscure affections indiscriminately; and disappointment and temporary neglect of its real merits were the inevitable result.

But the iodide had substantial merits of its own, so that its use never ceased from among us; and it is again, perhaps, in greater, certainly in more rational, request than ever. It has never ceased to be used as a prompt and certain remedy (specific?) in periostitis, and is relied on for this purpose as much as quinine is for ague, or arsenic for squamous skin-diseases. It is, however, as a remedy in cachectic conditions, and as a controller of the secretion of mucous surfaces, that the iodide has lately attracted attention, and it is in these relations, particularly in the former, that I wish to speak of it in this communication. The cachexiæ of syphilis and of chronic rheumatism, whether in their early or in their later manifestations, always forms a large proportion of our hospital and dispensary practice. The latter, in fact, is the heaviest burden imposed on the labour of the officers and the funds of the institution. I have for some years treated such cases of chronic rheumatism with five-grain doses of the iodide and cod-liver oil, with tonics and good diet, as individual cases required; and generally with fair success. Still there always remained a residuum of intractables, on which little impression was made. Patients advanced in life, with broken health, impaired digestion, torpid functions, anæmia, and emaciation, and with painful and swollen joints, are apt to resist these and many other modes of treatment, except, perhaps, on their first application. So, again, cases of sciatica or other neuralgiæ, under like general conditions, where the strength has been much reduced, defy the same means, even when supplemented with any amount of iron or arsenic. With regard to syphilitic cachexia, we have not generally the same amount of depression or general derangement; but still cases are constantly occurring in which no recognised remedies appear to tell. This is particularly so where there are nocturnal pains rather than nodes, and where the skin is decidedly affected; but more especially wherever the general cachexia is the most strongly marked. Now, in all these cases, I have lately tried, and in some with marked success, *very large doses* of the iodide—i. e., from gr. xxx ter die. This practice is not new. Dr. Elliotson proposed it many years ago, and it has been again strongly recommended lately in the metropolitan hospitals; but, so far as I know, no attempt has been made to fix on the class of cases adapted for it, or to establish the principle that it is applicable to the *cachexia*, rather than the local or specific disease.

There is a strong natural reluctance to the use of large doses of che-

micals of which the components are individually active, not to say poisonous. One drachm of iodide of potassium represents a poisonous dose of iodine; and yet thirty-grain doses may undoubtedly be given three times a day with perfect impunity. Nay, more, the occurrence of physiological symptoms, as coryza, is almost unknown where the large doses are given. As I wish this paper to be practical, I shall abstain from any speculation as to the causes of this tolerance, and, indeed, from any attempt to determine the theory of the therapeutic action of the remedy; but shall at once refer to cases in illustration of my views.

CASE I. Henry Hoogensen, aged 29, was admitted November 9th, 1866. He was a robust, muscular, large-made seaman, but was now looking laggard, depressed, and attenuated. He had copper rash on the forehead, breast, etc., and nocturnal pain with old swellings of the smaller joints, and scars of ulceration on the penis and tonsils. He had been three months under the treatment of an intelligent and experienced surgeon, but said he was getting worse. During this time, he had been taking five-grain doses of the iodide. He was put under cod-liver oil, decoction of cinchona, with nitric acid, and full diet, with a view of restoring his shattered health, before specific treatment was begun. The improvement was trifling; and, a fortnight after admission (Nov. 15th), he began ten-grain doses of iodide, which were rapidly increased by daily additions till they arrived at twenty-five grains three times a day. He improved sensibly from the commencement of the large dose system, and left the hospital in robust health, and without pains or eruption, in the fifth week—the third of the large dose treatment.

CASE II. James Anthonpe, aged 27, contracted syphilis four months ago. He had been more or less under treatment ever since. On April 18th, 1866, he came into hospital with old nodes, copper eruption, nocturnal pains, and general feebleness and wasting. He was put, after slight preparation, on the large dose system (gr. xx of iodide), and left the house in good health May 4th.

CASE III. A gentleman, aged 32, applied February 4th, 1867. He was covered with copper eruptions, and complained of nocturnal pains. He was in bad health, having lost flesh, strength, and appetite. He took the iodide in such doses ($\bar{3}$ ss) that a country druggist refused to make up the perscription, and sent it by post to me for correction. The early progress of this case was most satisfactory, and for one month he improved rapidly. He then had some return of his rash; but his health was re-established, and he had lost his pains. In this state he now continues (May 1867); but he insists on continuing the medicine from time to time, as he is convinced that it controls the rash.

CASE IV. A gentleman aged 38. The case was very similar to the above; but the eruption on the face was more disfiguring, and was complicated with acne. His general symptoms quite disappeared in three weeks, under the use of twenty-five grain doses; but the skin disease is more intractable. He, too, insists on continuing the medicine, from his conviction of its efficacy. He is now (May 30th) quite well.

CASE V. The case of John Bush, aged 30, shows that the maximum doses are not always required. He was admitted into the hospital December 18th, 1866, having slight constitutional symptoms and pains in the large joints, and copper stains on the forehead and arms. He had primary sores and sore-throat four months ago. He began with a three grain dose of the iodide, which was raised to thirteen grains three times a day, but not further increased; and he was discharged cured June 10th 1867.

CASE VI. F. Goring, aged 29—a more recent case, but still marked with cachexia. He had primary syphilis two months ago, and now presented two large nodes. He took twenty-five grain doses of the iodide three times a day, and left the hospital cured.

CASE VII. A young recently married gentleman had primary syphilis many months ago, and supposed himself well and justified in marrying. Both himself and his wife had copper stains and indurations about the genitals when he applied to me, and I had no hesitation as to their syphilitic character. They have taken the iodide in twenty-grain doses, and are free from the rash *while they are taking it*: but, as in the above cases, the rash re-appears when it is discontinued, though the other symptoms are cured. It would appear that the general or cachectic character of the symptoms should be our guide, rather than the history or duration of the case, though no doubt this character is more marked in proportion to the duration. Where, however, the characteristic rash and loss of strength and general health occur even while primary sore is present, the large dose system may be used with advantage (the inoculation having probably been from a tertiary case).

CASE VIII. A medical gentleman in midwifery practice, had a suspicious sore on his finger in March last, and treated himself on the suspicion that a parturient patient might have affected him. In April, he had eruption and general loss of health. He began to take the twenty-grain doses, and is now well.

The following case may lead us to hope that the interesting and perplexing cases of syphilitic cerebral disease, on which so much light has recently been thrown, may prove to be under the same control.

CASE IX. Thos. Butterfield, aged 36, a robust town labourer, had

been labouring under the postponed forms of syphilis in a severe form for many months, and for the six months preceding the present notice, was the subject of necrosis of the parietal bone, eruptions, and nocturnal pains, for which he had taken the ordinary remedies with very indifferent success as an out-patient. We had lost sight of him for several weeks, when he reappeared January 7th, with strabismus, giddiness, loss of memory, and confusion, and in a very emaciated condition; the external symptoms of disease remaining very much as before. After some preparative treatment, the full doses of iodide were given; and all special symptoms were removed, and his general health re-established, on February 10th—the necrosed bone remaining in the same state as before. He continues an out-patient, in good health.

With this case I close my list of syphilitic cachexiæ treated by this method. I have had nothing so decisive to adduce in regard to rheumatic cachexia. In fact, I can only state in general terms that, where I have employed large doses, great amendment of general symptoms has usually followed, and sometimes much local relief. But there is undoubtedly more tendency to the recurrence of the disease; in fact, the local symptoms are never entirely overcome. In sciatica, I have succeeded by this method in two very obstinate and protracted cases, which had long resisted treatment.

CASE X. Henry Robinson, aged 27, after for many weeks suffering from acute pains in the sciatic and its branches, and being much reduced by loss of appetite and sleeplessness, began the large doses of iodide on March 13th, rapidly increasing them to twenty grains three times a day; and on the 18th of April he left the hospital free from the complaints. And Stephen Sprag, aged 30 (both farm labourers), had been suffering similarly, and almost to the same degree for three months. He commenced the twenty-grain doses on the 21st of March, and on the 9th of April left the house in his usual health. In both those cases, and, to the best of my belief, in all here narrated, the iodide had previously been given for some weeks in five-grain doses without effect; and the change followed so directly on the large doses as to justify its being attributed to their influence. In neither case has there been recurrence.

In the treatment of these cachexiæ, I do not exclude regimen and dietetic adjuvants, though I admit I have made the treatment in the above cases as pure as possible, to avoid the risk of fallacy. But I do not doubt that the old methods of skin-elimination, by external or internal means, or by a combination of the two, as in the "Zitman method," would greatly assist. At all times, the vehicle of the iodide may with advantage be the decoction of sarsa or of the "woods."

I would add a few remarks on the action of the iodide on the mucous surfaces. In a certain proportion of cases, the salt, in ordinary medicinal doses (say gr. iii. to iv.) will produce irritation of the Schneiderian membrane and coryza; but, as I have already said, this is not the case where a large dose is used. This, I think, points out that the small doses are more likely to affect the mucous tracts generally than the large, and should lead us to employ them when we have this object in view. My observations have chiefly had reference to the pulmonary membrane; but there is good reason to believe that the other tracts, and perhaps more notably the genito-urinary of the female, are amenable to its influence. I will cite two cases of very severe capillary bronchitis, in which I believe relief was afforded more rapidly by the use of the iodide, combined with a very small dose of tartarised antimony, than would have resulted from the use of either remedy alone—certainly, than if the tartarised antimony only had been used.

CASE XI. J. Skerat, aged 48, a town labourer, subject to chronic bronchitis, was seized with a very violent attack of dyspnoea and lividity in the early days of March, and was admitted into the hospital in a very alarming state. There were physical signs of minute bronchitis over both lungs; and his general symptoms corresponded with this local condition. He had stupes and expectorants, with one-eighth of a grain of tartarised antimony, for several days, with partial relief; and on the 25th he began to take three grains of iodide of potassium, with one twelfth of a grain of tartarised antimony, every three hours. From his commencing this treatment, his improvement was very marked, and he was convalescent on April 18th.

CASE XII. W. Hudson, a traveller aged 48, exhibited on admission (Feb. 21st) a very similar condition. His respiration was 40; his cough incessant; and he expectorated half a pint of muco-purulent fluid in twenty-four hours. Small moist rhonchus was heard throughout. On March 2nd, he began the same doses as in the former case; and his improvement was equally immediate and satisfactory, as he was quite convalescent on the 20th.

I have notes of other cases in which some advantage seemed to result from the treatment, but none so decided as these; but the cases in which no benefit seemed to result were very few.

The efficacy of the large dose system in the cachexiæ, and notably in syphilitic cachexia, seems to be established, not by the few cases here adduced, but by their accordance with many others now on record, and to which I have seen an addition within a few days. The action of the drug upon mucous diseases I purpose still to continue to investigate; and

I hope that ere long we may have arrived at that stage in the accumulation of facts which will justify an attempt to generalise with more confidence, and to extend by induction the application of the resulting laws.
British Medical Journal.

CAN TYPHOID FEVER BE ARRESTED?

Dr. Strong, of Buffalo, (*Buffalo Medical and Surgical Journal*), answers this question in the affirmative. He thinks he has accomplished the purpose by applying a blister to the iliac region as soon as the diagnosis is established, and repeating it, if necessary. The practice is not exclusively original with Dr. Strong. We have employed it repeatedly, and we believe it has been used by several other physicians in California. The only wonder is that, in view of the pathology of the disease, counter irritation to the iliac region, or some other system of topical treatment, is not universally adopted. Perhaps the authority of Louis, who prohibited blisters altogether in typhoid fever, has determined the general course of medical practice in this respect. In spite of that high authority, we are inclined to concur with Dr. Strong. Further, there is a great variety of topical means besides vesication, which may be resorted to.—*Pacific Medical and Surgical Journal.*

OBSERVATIONS ON THE TREATMENT OF ZYMOTIC DISEASES BY THE ADMINISTRATION OF SULPHITES.

By PROFESSOR JOHN POLLI, M.D., Milan; Honorary Member of the British Medical Association.

It has been long admitted in medicine that there are diseases whose cause and origin is a specific ferment, either generated within the system, or introduced from without. Such would be, for example, the different viruses, contagious poisons, miasmata, etc. These morbid ferments, inducing a special decomposition of the blood or of the humours, would seem to generate that series of maladies which we term zymotic, and which would seem to depend on the efforts made by the morbid process either in the assimilation or in the attempts at expulsion of the diseased heterogeneous products, and in the resulting reaction of the nervous system against the iniquation of the newly formed blood. When time and strength are in sufficient quantity to enable him to eliminate the products of the fermentative decomposition of the blood, the patient recovers. When, on the contrary, the iniquation of the blood is greater than what can be eliminated by the vital force of the patient, he dies. It had long been the fervent desire of physicians that some means might

be devised of neutralising these morbiſic ferments; but, up to the present age, it had still remained unaccomplished, as, of the many substances which were known to have the power of neutralising ferments, none had yet been found which could be employed with safety; as all those agents which were known to have a sensible power over such ferments were always of so destructive a nature as to render their administration inconsistent with life—for instance, arsenic, chlorine and the hypochlorites, nitric acid, hydrocyanic acid, bichloride of mercury, etc. But while these are, no doubt, strongly antiseptic agents, and adapted to preserve dead specimens of the vegetable and animal kingdoms, they cannot with impunity be administered to living bodies. A substance was still to be discovered, which, while possessing the power of rendering organic matters incapable of being acted on by those fermenting principles, would at the same time exercise this function without in any way endangering any of the vital processes.

During a long series of researches, dating from 1857, and undertaken with the view of studying the different fermenting processes of organic matters which seemed to bear some analogy to the different morbiſic alterations of the animal economy, I came to the conclusion that in sulphurous acid we possess the most active agent in arresting all fermenting processes, even those over which arsenic and hydrocyanic acid have no power, such as synaptasic and saligenic fermentations (see Piria and Bouchardat); or those which are not arrested by phenic acid, as the diastasic, myronic, pepsinic, and ptyalinic (see Lemaire). But sulphurous acid cannot be administered as gas, except largely diluted with air; nor as an aqueous solution, except largely diluted with water; and its local action, besides, is always difficult to tolerate.

I then turned my attention to its combination with the alkaline and earthly bases, such as sulphites of soda, potass, magnesia, lime, etc., and the hyposulphites of the same base, which last, during their passage through the animal economy, become sulphites and bisulphites by the absorption of oxygen; and I was delighted to find that these salts possessed all the properties of free sulphurous acid, with this advantage over it, that their action is more uniform, more constant, and even more intense. Proceeding with my experiments, I administered all these sulphites to dogs, and found that they were perfectly tolerated even in large doses and continued for a long time. I also took large doses of these salts myself, and administered them to friends who were willing to undergo the experiments, in doses of from eight to twelve *grammes* in twenty-four hours, without experiencing the slightest inconvenience. I also found that those animals which had been fed with sulphites for

some days, and then killed and dissected, resisted the putrefactive decomposition for a long time, and remained fresh when other dogs which had been similarly fed and then killed, but had not previously received any sulphites, had long passed into a state of decomposition. I also found that whilst I could, without any apparent inconvenience, take even as much as fifteen *grammes* of sulphite of magnesia in the day (I prefer this salt, as it is almost tasteless, and contains a larger quantity of sulphurous acid), I lost all feeling of thirst; that my excrements had lost their usual fæcal smell, which was replaced by the smell of pure sulphuretted hydrogen; and that the urine emitted during these experiments remained fresh, acid, and clear, and did not undergo the ammoniacal fermentation (see Van Tigem) for eight or ten days during the hottest Italian summer; while my urine emitted both before and some days after I had taken the sulphites became ammoniacal, fœtid, and covered with fungoid growths, in from five to seven days.

In another series of experiments, I tried the effects of the sulphites as prophylactics and as curative agents on animals in whom a septic disease had been artificially induced by injecting into their veins different animal poisons, such as putrid blood, fœtid pus from unhealthy abscess, and the discharge of glandered horses. The result of these experiments practised on dogs, and variously conducted, proved to evidence that sulphites had the power in some instances of entirely preserving the animal from the action of these morbid ferments, and in others to enable the animal, after a short illness, to regain its health: while, in almost every instance of septic injection, the administration of sulphites was sufficient to effect a more or less rapid cure of the typhus or typhoid fevers induced.

After such results, I had nothing more to do than to invite the medical profession throughout the world to undertake the clinical experiments with these salts, of which I had already determined the mode of action and the dose in all those diseases in which one might suppose by analogy that the morbid process was a kind of fermentation in the blood, or an induced alteration of the nutritive process, by the presence of an agent operating as a ferment. Such, I believe, would be the case in the various eruptive fevers, measles, small-pox, scarlatina, miliary fevers; in intermittent and other marsh-fevers produced by paludal miasmata: in typhus and typhoid fevers, either epidemic or contagious; in purulent absorption, as in puerperal fever; in fevers consecutive on serious surgical operations, and after dissecting wounds. This call was most freely answered by the medical men of Italy, as well as by some foreigners; among which last I feel happy to name Dr. H. R. de Ricci of Dublin, who was the first—viz., in 1862—to give a full and valuable report of

my first researches on the subject ; and who invited his professional colleagues to test the real value of these sulphites by repeating the clinical experiments which he had already initiated ; also Dr. W. Jackson Cummins of Cork, who proved successfully these salts in scarlatina, both as curative agents and as prophylactics ; also Dr. Hayden, of the Mater Misericordiæ Hospital, Dublin ; who tested very accurately the hypsulphites in diphtheria

I published my first memoir on this subject in 1861, and since that time one hundred and forty-eight papers have been published in answer to my call ; and, with the exception of five or six, containing some criticisms on my labours, all the remainder confirm in the strongest terms by many hundreds of detailed observations, the value of these remedies in the diseases above mentioned. By means of the sulphites, the course and sequelæ of eruptive fevers are entirely under control, mild cases being rapidly cured, and aggravated ones being rendered mild. In intermittent fevers, the same results are obtained ; and here I have had the most extensive opportunities of trying this new remedy, as, in consequence of the special condition of Lombardy, and the vast area of land constantly under water for the cultivation of rice, paludal fever is the most frequent malady in our hospitals. I have found that I could conquer the most rebellious malarious fevers of every type, either quartan, tertian, or remittent, by employing sulphites only ; and hundreds of cases, treated by numerous provincial doctors, and by them published, corroborate my experience that not only are the sulphites equal to quinine in the treatment of the various forms of ague, but that they are even superior to it, inasmuch as patients treated with them are much less liable to relapse. These facts are so well known and appreciated in Italy, that the Royal Lombard Institute has established a prize of 2,500 *francs* (£100) for the best essay "On the Use of Sulphites in Fevers, as compared with other Remedies."

Sulphites have also been used with great success in petechial typhus, in typhoid fever, and in the peculiar fever which follows in cholera ; and many papers have been published, establishing these facts, by many of the principal Italian physicians.

Sulphite of soda, as a lotion, has also been extensively tried by many surgeons in the treatment of external sores ; and I shall here only mention Dr. Burggræve of Ghent, who seldom, if ever, uses any other dressing on all suppurating surfaces, and who has placed on record that the results of this medication, both internally and externally, are no less marvellous in the treatment of cases of purulent absorption, gangrenous infection, puerperal fever, dissecting wounds, etc. So much is this sul-

phitic external treatment of all forms of wounds and sores, whether simple or with a tendency to gangrenous degeneration, gaining ground in Italy and other parts of the Continent, that in many places it has completely superseded the use of all other dressings; and, at this time, Professor Gritti, surgeon-in-chief to the great hospital of Milan, never uses any other external dressing, for not only does it prevent any fermentative process in the parts to which it is applied, but in many cases its immediate action is that of an anæsthetic; but it also destroys all bad smells; it is inodorous in itself, and colourless—a great and positive advantage, and one which cannot be claimed by many disinfecting substances, as coal-tar, phenic acid, the permanganates, etc.

In concluding this compendious communication, to which you have lent so courteous an ear, I beg to recommend these sulphites to your clinical experimentation. For internal administration, in a *curative* point of view, I recommend the sulphite of magnesia, both as containing more sulphurous acid, and also as being pleasanter to take. As a prophylactic, I recommend the hyposulphite of soda, when it does not act too much as a purgative; and, for external use, I advise the sulphites and bisulphites of soda, which are more soluble than the magnesian salts. On trial, these sulphitio preparations will be found of much value in more particulars than one. The sulphite of magnesia will always be tolerated by the stomach, even in extreme cases of irritation. It never acts as a poison, and therefore an erroneous dose will never be productive of evil—a quality which it alone possesses among those remedies which have any decided value. Its extreme cheapness is another merit; it is, perhaps, the cheapest remedy in the whole materia medica; and, when its real value has been ascertained, its cheapness will still more be appreciated.

I do not put forward these sulphitic salts as a panacea. I wish my professional brethren to put them to the test of clinical experiment; and I shall feel indebted to them more for the notes of their unsuccessful cases, if accurately observed, than of the favourable ones.

And now, in conclusion, let me observe that these salts do not act as poisons towards the several morbidic ferments, which we have supposed to be the cause of the several zymotic diseases. They do not kill the catalytic germs of the organic poisons; but they react on the material components of our own organism, rendering it by their presence, incapable of being acted on by these catalytic germs. It is, therefore, easily comprehended how extensive and beneficial must be the use of these sulphites, when it is remembered that among zymotic diseases we class the most numerous, the most obscure, and the most fatal of all diseases.—*British Medical Journal.*

A NEW METHOD OF RESUSCITATION FROM HYPERANÆSTHESIA
BY CHLOROFORM.

At a recent meeting of the New York Academy of Medicine, Dr. Worster read a case in which chloroform had been administered to a patient, by a party whom he regarded as competent, as a preparatory step to an operation, by himself, for the relief of hæmorrhoids. Suddenly the patient had stertorous breathing, became pulseless, and exhibited all the symptoms of a speedy dissolution; but by the simple expedient of reversing his position, and inclining his body to an angle of forty-five degrees, he was fully restored.—*N. Y. Med. Record.*

Midwifery and Diseases of Women and Children.

HOW TO PRODUCE THE SEXES AT WILL, AND HOW TO PREDICT
THE SEX OF THE FÆTUS.

We lately called these hard questions, and certainly they are so. But what could be more important than to be able to produce male or female children, as we wished? To control as might be desirable, the percentage of sexes in a population? To bring about that happy equipoise when there would be no sighing maids at home, nor want of warriors in the field?

Many a plan has been suggested, and perhaps among them some have not received the attention they merit. Some physiologists have supposed that one ovary produces males, the other females. The suggestion has been made, that did the woman, immediately after congress, lie a while on one side, she would always have one sex for offspring. We have learned from a lady who tried this in eight conceptions, that turning on the left side produced always males, on the right, females.

But a more plausible theory is that of M. Thury, professor in the Academy of Geneva. He observed that the queen-bee lays female eggs at first, and male eggs afterward: that with hens, the first laid eggs give female, the last, male products; that young bulls, who meet the female at the first signs of heat, generate heifers more frequently than old bulls who are exhausted and do service later; that mares, shown the stallion late in their periods, drop horse-colts rather than fillies. He formulated, therefore, this law for stock raisers: "If you wish to produce females, give the male at the first signs of heat; if you wish males, give him at the end of the heat." We have before us the certificate of a Swiss stock grower, son of the President of the Swiss Agricultural Society, Canton de Vaud, signed in February of the present year, which says, speaking of the accuracy of this law:

“ In the first place, on twenty-two successive occasions, I desired to have heifers. My cows were a Schwitz breed, and my bull a pure Durham. I succeeded in these cases. Having bought a pure Durham cow, it was very important for me to have a new bull, to supersede the one I had bought at great expense, without leaving to chance the production of a male. So I followed, accordingly, the prescription of Professor Thury, and the success has proved once more the truth of the law. I have obtained from my Durham bull six more bulls (Schwitz-Durham cross) for field work; and, having chosen cows of the same colour and height, I obtained perfect matches of oxen. My herd amounted to forty cows of every age.

“ In short, I have made in all twenty-nine experiments after the new method, and in every one I succeeded in the production of what I was looking for—male or female. I had not one single failure. All the experiments have been made by myself, without any other person’s intervention; consequently, I do declare that I consider as real and certainly perfect, the method of Professor Thury.”

In August, 1863, M. Thury submitted his plan to the Academy of Science at Paris. It was tried on the recommendation of that body, on the Emperor’s farms, with, it is alleged, the most unvarying success.

A farmer in Louisiana writes thus to the *Turf, Field, and Farm*, in reference to this law, as applied to men. “ I have already been able in many cases to guess with certainty the sex of a future infant. More than thirty times, among my friends, I have predicted the sex of a child before the birth, and the event proved nearly every time that I was right.”

The idea was not new. As long ago as July, 1863, Dr. Packam, of Wimborne, wrote to the *London Lancet* that, “ In the human female, conception in the first half of the time between menstrual periods produces female offspring, and male in the latter. If a woman is “ out ” in her reckoning, if she goes beyond the expected time, the babe generally turns out to be a boy.”

The husband, therefore, who would, with Macbeth, say to his wife,
 “ Bring forth men-children only,”
 let him avoid exposing her to conception during the first half-term of her inter-menstrual period.

The value of this as a means of prognosis is obvious. It may be assisted by other observations. That, as many old nurses say, there is any difference in the figure of a pregnant woman when she carries different sexes, we do not believe. Nor is the one more active in “ movements ” than the other. But Dr. Frankenhauser, a few years since, in the

Monatschrift für Geburtskunde, stated that the beats of the foetal heart are more frequent in females than males. The mean frequency of twenty-eight female foetuses is 144 in the minute—the lowest figure 138; the mean frequency of twenty-two male foetuses is 120—the lowest figure 112. He thus predicted with great accuracy the sex of the unborn child, and only failed, indeed, when either the pains of labour or the illness of the foetus had deranged the natural action of the heart.

Such, in brief, is about the sum of our knowledge on this interesting subject. We are near enough to a solution, to encourage us to give it further and more earnest study.—*Philadelphia Medical and Surgical Reporter*.

ON EXTERNAL MANUAL PRESSURE OF THE UTERUS DURING THE SECOND STAGE OF LABOUR.

By JOHN K. SPENDER, M. B. Lond., Bath.

Last July, I attended a lady in her eight confinement, whose chief trouble had always been excessive *post partum* hæmorrhage. She is a person of diminutive stature, and of choreic tendencies. The pregnant womb at full time has always shown a disposition to anteversion, so that when the patient lies on her side, the fundus uteri tips over, apparently from the mere weight of its contents.

This labour was unusually tedious, owing partly to the too early escape of the liquor amnii. Suddenly the thought struck me, that, if I clasped the uterus by placing the out-stretched hands on the abdomen, and then exerting firm pressure in a backward and downward direction (the nurse making counter pressure on the back), I should help the natural forces a good deal. I did so for an hour during every pain; and the result was, that the labour came rapidly to an end; the placenta was expelled by the final pain which expelled the child; and the afterflooding was almost *nil*.

The pressure produced benefit in several ways. (a) To a great extent it rectified the position of the uterus, and *pro tanto* the axis of the foetal track into the world was made right too. (b) It gave a physical stimulus to the uterine fibres, and increased their expulsive power. (c) It caused a more complete contraction of the uterus after the birth of the (living) child, thereby checking the tendency to hæmorrhage. Other collateral advantages also were secured.

A few days after the event which I have related, I noticed in a recent number of the *Medical Times and Gazette* that Dr. Barnes speaks in

approving terms of the practice of external manual pressure of the uterus. But, so far as I am aware, the subject is not formally treated of in modern text-books of midwifery.—*British Medical Journal*.

PROLAPSUS OF THE URETHRA IN LITTLE GIRLS.

This disease is not so unfrequent as might be supposed, and in an article published on the subject in the "Revue de Thérapeutique," M. Guersant states that he has observed fifteen cases of the affection in little girls between two and twelve years of age.

Eversion of the urethra, like prolapsus of the rectum, occurs only under an enfeebled state of the constitution. When this predisposition is present, bearing-down efforts or paroxysms of cough are sufficient to occasion the displacement of the mucous lining of the urethra. A small roseate tumour then forms at the meatus, with a central orifice, through which a bougie can be passed down into the bladder. This condition may last some time without attracting notice; but it often produces pain and difficulty in voiding urine, irritation of the vulva, a puriform discharge; and it has even been known to induce superficial mortification.

Urethral polypus is the only disease which might be mistaken for proidentia urethræ, but the polypus will be discriminated by the existence of a pedicle.

For many reasons it is desirable to remove the affection, and excision is the most appropriate measure for the purpose.

Chloroform having been exhibited, the part is exposed, and the mucous membrane being secured and gently drawn outward with a loop of thread or a tenaculum, the exuberant fold can be easily cut off with curved scissors. A very small quantity of blood escapes, and the hæmorrhage promptly yields to cold water compresses, or to the local application of diluted sesquichloride of iron. In a case in which the hæmorrhage proved more obstinate, M. Guersant resorted with success to the application over the hypogastric region of a bladder filled with ice.

In most cases the operation presents no difficulty, and produces merely a little pain for a day or two in passing water; cold lotions, and if necessary, superficial cauterization with nitrate of silver, may be required to promote cicatrization.—*Journal of Prac. Med. and Surg.*

Canada Medical Journal.

MONTREAL, FEBRUARY, 1862.

On the eleventh day of December last, the City Clerk of Montreal, by public advertisement inserted in the leading English and French newspapers of the city, gave notice that on and after the 1st of January, 1863, section 4 of the By-law concerning burials would be rigidly enforced. The effect of the enforcement of this By-law, which prohibits the keeper of a cemetery from receiving any body for interment unless accompanied by a certificate from the attending physician, would be to give a correctness to the returns of mortality, which are now, as they have been in the past, all but utterly worthless for statistical purposes. In our last number we took notice of this advertisement, and held that the By-law would not afford all the benefits which we thought could be derived from its enforcement, unless the Corporation supplied the physicians of the city with the blank form mentioned in the By-law. We feared that some certificates might be handed in, which would be deficient in some essential details, but we were not prepared to think that the profession would be so careless as to allow two whole weeks to pass, and upwards of one hundred interments to take place, without the presentation of a single certificate. Yet such is the fact, and we must honestly say it is not one which redounds to our credit. We know that it has been objected on the part of some, as troublesome to make out a blank form, but as there could be no doubt but that eventually the city would furnish them, surely it was worth some little trouble to have reliable statistics of mortality from the first day of the year. In this we have failed, and while we blame the physicians of Montreal a very great deal, still we cannot hold our Health Committee, (who, we believe, suddenly ordered the enforcement of the law) altogether as undeserving of censure. Having given notice of its enforcement, it was their duty to have watched the handing in of the first weekly mortality sheet from both our cemeteries—and if unaccompanied by a certificate for each name recorded upon it, to have informed the keeper of those cemeteries that the law would be rigidly enforced, and that the presentation of the following weeks mortality sheet

similarly deficient, would lead to the penalty being executed against them. This would certainly have had the desired effect, for we know of no By-law which can be more easily enforced. Let the keepers of both cemeteries absolutely refuse interment, unless a certificate signed as directed by the By-law, be given them—and we vouch for it, the certificate will be forthcoming. But surely now that we have drawn attention to the matter, we may expect that the profession will show some little spirit and second the efforts of the Corporation, in a matter which is deserving of their warmest support.

Since the above was written we have made enquiries, and find that the mortality sheet of the Mount Royal Cemetery, for the week ending Saturday, January 25th, has one certificate accompanying it: that from the Roman Catholic Cemetery has not any. It is really too bad that the profession ignores the existence of such an excellent By-law. As the Health Committee have resolved to have the necessary blank forms printed immediately, for the purpose of supplying the profession, we hope soon to see the law in full operation. We need hardly add that any physician who neglects to furnish a certificate when required, after he has been furnished with blank forms, deserves to have the full penalty of \$20 enforced against him.

THE RELATIVE RANK OF VOLUNTEER SURGEONS.

The following very singular order appears in the *Canada Gazette*. "Militia General orders: Head Quarters, Ottawa, 17th January, 1867. No. 1. In future all gentlemen who may be, or who may have been appointed to the Civil Staff of Battalions of Volunteers, will be considered to hold relative rank as follows: Surgeon to rank as Captain on appointment; after five years service as Major. Assistant Surgeon to rank as Lieutenant on appointment; after five years service as captain. It is to be distinctly understood, that relative rank confers no military *status* or command."

We have always thought that the relative rank held by medical officers of the Volunteer Service, was similar to that held by the medical officers of Her Majesty's regular army, and the promulgation of the above order, which establishes a standard distinct and separate in the case of the Volunteer Surgeon, is our first intimation to the contrary. We are not aware of the reasons which have induced the authorities to issue such an order, and for our part we object to it as inexpedient and calculated to damage and dishearten the Medical Volunteer Staff. In Her Majesty's regular army, there are no first appointments to Surgeoncies of regiments; all must have previously served as Assistant Surgeons, but we believe that

no Assistant Surgeon was ever gazetted to a Surgeoncy, and had its relative rank, that of a Major, denied him. In the volunteer service, many are appointed Surgeons, who have not been Assistant Surgeons, and we fancy it is to meet this class of cases, that the order has been issued. If so, we still say the order is most injudicious, for if the Surgeon is worthy of his appointment, he is worthy of holding the rank which is assigned to a similar position in the regular service. Again the order affects Surgeons who have been already appointed, and who by common consent took the rank of Major, immediately upon their appointment, and we fancy that they will not quietly sit by and see their heretofore presumed rank taken from them. If they do, we much mistake their temper and their spirit. But aside from the injudiciousness of the order it is most unjust. Let us explain. In the regular service, after six years' service, the Assistant Surgeon takes rank as Captain, and we believe after six more, his rank of Major, and following this rule in the Volunteer Battalions, medical officers have been assessed for the regimental expenses. Now let us give an actual case. An Assistant Surgeon was appointed in May, 1860, to a Volunteer Regiment, and in May, 1866, completed his six years service, and assumed his rank as Captain. In the October following the Surgeon resigning, the Assistant Surgeon was promoted to the Surgeoncy, and assumed the rank of Major, being assessed on the regimental books, the usual promotion fee. Is it to be presumed that this officer will be compelled to serve five more years before he can rank as Major? It would not be so under similar circumstances in the regular service, and we think the militia authorities will find some difficulty in persuading the profession that there exists any necessity for the departure, which the order above quoted implies, from the rule heretofore adopted, of following the practice which exists in the Medical Department of the army. The Medical Staff of the Volunteer Force is one which requires careful fostering, and we fear the effect of the above order upon it.

Perhaps it may seem as if we were deficient in comprehending the phraseology of military orders, but we must confess to have read over the last paragraph of the order, more than once, and each time been further off comprehending it. We can readily understand a relative rank conferring no military command, but we fail, we honestly confess it, to see why relative rank should not confer military status, equal to the rank held. When the English Volunteers visited Belgium in 1866, those high in command disregarded the *Military Status* of the Volunteer Surgeons who accompanied the excursionists when the invitation to the festivities were issued, but on their return, such an expression of feeling burst

forth from the Medical Volunteers of England, that those guilty will not soon forget. Medical men are usually not accused of putting themselves forward, but we can but think that Volunteer Surgeons and Assistant Surgeons will be quite right to claim the military *status* of their rank. Already we have received several letters calling our attention to the matter, and others have appeared in the daily papers. We can state to all who have written us on the subject, that our pen will battle with all the vigour it is able, against the adoption of such an injudicious and unjust order.

THE QUESTION SETTLED AT LAST.

Ever since the first inception of the Volunteer Movement in Canada it has been a *questio vexata* as to whether a Surgeon was entitled to appear mounted on parade. The Militia authorities, we believe, took the ground that the Surgeon had no such right, and a Surgeon of a Volunteer Regiment in Montreal, was a few years ago brought before a Court of Enquiry for appearing mounted on parade. If we are correctly informed the decision of the Court was not very explicit or decided; they admitted his right to go mounted to parade but insisted he should dismount during inspection. The Surgeon, notwithstanding this Court of Enquiry, continued to appear mounted whenever his regiment paraded in public, and we heard frequent threats of again bringing him before a Court. Now, however, the matter is set at rest, an order having been recently issued by His Royal Highness the Duke of Cambridge, the Commander in Chief, directing Medical officers of the Army, who have the relative rank of Field officers, to appear mounted on parade in future. We are glad to notice that the services of the Medical Department are being appreciated.

ACUPRESSURE.

We make the following extract from a recent letter received by the senior editor from Sir James Y. Simpson, of Edinburgh, the eminent proposer of acupressure for the arrest of hæmorrhage. "Lately, Dr. Pirrie, Professor of Surgery, Aberdeen, wrote me that he has now had fifteen cases of excision of the mammæ, in which he employed acupressure. Ten of these fifteen cases have healed without one single drop of pus. Five of these ten were Hospital cases." This is certainly a most encouraging report. We have employed acupressure in the Montreal General Hospital, in several cases, one of amputation through the condyles of the femur: this was our first experience, and it was with doubt as to the result that we removed the pins on the third day, but no

further trouble followed. So great is our confidence in the use of the pin or needle, as a means of arresting hæmorrhage, that we will in future discard the use of the ligature even in aneurism. We cannot see why acupressure should not supersede the ligature; we have not, so far, had an opportunity of trying, but certainly on the very first occasion we shall put the suggestions of Professor Simpson to the test in this particular, and we feel confident as to the result.

"THE PACIFIC MEDICAL AND SURGICAL JOURNAL."

We have regularly mailed our Journal to the above address, if not duly received the fault is not ours. With regard to Dr. Wooster's excellent paper on "general rules for diagnosis and treatment of diseases of the heart," copied by us from the Pacific Journal, we can only say, in apology, that we made the necessary corrections in our proof, giving full credit to the Pacific Journal, but the printer omitted to make the correction. It will be noted that Dr. Wooster's paper appeared in our Periodic Department and not under the head of Original Communications.

VENOUS (AND MARS.)—A Paris correspondent of the *New York Medical Record* tells the following amusing story:

"One day lately, the *garçon de service*, employed in the wards of Dr. Fouquier, appeared with two black eyes, and his face covered with bruises. 'What is the matter with you, my man—inquired M. Fouquier, always kind and polite. 'I have been fighting with M. Bouillaud's *infirmier*, but he is more done for than I am.' 'You were very wrong. What were you fighting about?' 'Because he insisted that it is always necessary to bleed in typhoid fever?' The gravity of the physician was not proof against this unexpected reply. When it is remembered that M. Bouillaud is the author of the famous system of bleeding in pneumonia twice a day, *coup sur coup*, and extends his sanguinary propensities to typhoid fever also, the belligerent enthusiasm of his humble subordinates may be easily explained."

SIR WILLIAM FERGUSON lately made quite a formidable operation, namely, the removal, by reason of an osteo-sarcomatous tumour, of the whole scapula, half of the clavicle, and the entire arm. The patient died upon the third day. In January, 1865, Sir William removed a piece of the scapula from a young girl, and, the disease recurring, in November following, the remainder of the scapula, part of the clavicle, and the arm. This patient did well, and was exhibited on the day of the first mentioned operation, Oct. 19, 1867.