THE SIMPLEST UTERINE MANIPULATIONS AND OPERATIONS AND THE ACCOMPANYING DANGERS.

By Geo. J. Engelmann, M. D., St. Louis.

I. Introduction.

It will probably appear strange to you that I should speak of the danger connected with manipulations of the uterus, and that I should relate to you my own sad experience, and the unfortunate accidents which have befallen the ablest of my colleagues; that I should tell you of the risk attending even the slightest interference with the womb of woman, whilst you hear almost daily of dangerous operations successfully performed upon that much treated and maltreated organ; every medical journal which falls into your hands contains such accounts; each new operation outstripping its predecessor in boldness, each more desperate than the other, until we fairly wonder at the recklessness of the operators and the patience of women, and are forced to the conclusion that we may do with the uterus what we will, and the insult will be kindly received.

There is, however, another and a darker side to this very attractive and enticing picture, and it is this which I p[illegible]pose to analyze for you, believing that a detailed report of a few of the unfortunate cases, though it may fail to excite your admiration, will be of greater practical advantage than the reports of successful cases to which you are constantly treated, especially to those who have been fortunate enough to escape any such mishap as yet.

I received my first warning, and fortunately a mild one, shortly after I entered upon the practice of medicine in my native city in 1873; my attention was moreover attracted to the subject as a case was then pending in the courts, which was a most instructive one—death in consequence of bilateral incision of the cervix; the operation having been performed in the office of the physician, and the patient sent home in a carriage, cellulitis, peritonitis, and death followed in rapid succession.

The warning I then received taught me caution in uterine man-

ipulations, and told me that rest and quiet must follow, as a necessary sequence, upon even slight interference with that organ. From this time on, I am happy to say, I have met with no untoward accident of any kind, until the past winter, when three unfortunate cases followed in rapid succession: two deaths, and a serious pelvic peritonitis, in consequence of but very trifling interference with the womb.

They have caused me great annoyance and pain, as you may well imagine, and have been the subject of much earnest thought and study; in one case serious results originated in a slight carelessness on the part of the patient, in another from a disregard of the apparently unnecessary strict injunctions given, but for the third I cannot well account.

I will now relate these cases in connection with other similar ones, which occurred in the hands of our most careful and reputed physicians, and will refer briefly to their more striking features as these points are usually ignored in text-books and monographs alike; the intra-uterine injection being apparently the only interference which is worthy of being mentioned as at all dangerous.

II. The Dangers Accompanying the Simplest Manipulations about the Uterus.

Great care is necessary in all uterine manipulations; upon this point I would lay some stress on account of the constant resort to the sound and the applicator, even the sponge tent and the intra-uterine syringe, by all physicians regardless of their experience in uterine therapeutics. This is equally true in the centers of medical learning in the East as it is in the interior of our Western States, where a consulting physician cannot be reached. Dr. Clifton E. Wing, in an address delivered to the physicians of Boston and vicinity, before the Suffolk District Medical Society, on Modern Abuses of Gynæcology, April 10th, 1880, says: "It is surprising to see the number of physicians in good standing in the community, who are wanting in proper knowledge of the Diseases of Women, and do not hesitate to confess their ignorance when in conversation with professional brethren, who nevertheless treat patients for uterine ailments, and give them the impression all the while, that they are

good authority upon such matters. . . . . Some who, at one time and another, have many women in the families in which they practice under local treatment, are not competent even after they have made their examinations to tell what trouble is present." What untold harm is done by unskilled manipulators we may divine when Dr. T. G. Thomas, the judicious and expert operator, says that he has seen cellulitis and peritonitis, in several cases, follow the use of pessaries in his own hands; and how dangerous an instrument is the sound, the applicator, or the intra-uterine syringe in the hands of careless men, not to speak of the knife, and yet they constantly make use of them.

I, of course, presume that the most ordinary caution is observed, that instruments are skillfully handled and only introduced into the cavity of the uterus after we have excluded all such conditions in which the organ is peculiarly sensitive.

1. The physiological conditions of menstruation, pregnancy, and involution.

2. Pathological conditions, uterine or circum-uterine inflammation, whether recent or not, indurations, adhesions, etc., all of which contra indicate certain manipulations.

I had thus briefly referred to the dangers arising from the existence of a cellulitis, as I deemed the subject sufficiently well understood and did not properly consider how rarely this most important complication is detected, when limited in extent, and when detected how rarely the warning its presence should convey is understood. I will accordingly add a few words at the suggestion of my valued friend Dr. T. A. Emmet, who has so thoroughly and so forcibly treated this subject in his recent work (p. 259, 2d ed.) and I can do no better than quote his own words: "I hope that you will point out the great danger which lies in the existence of cellulitis, which will be found to a greater or less degree in almost every case coming under the charge of the surgeon, and that sometimes, even with the most careful preparatory treatment, serious consequences follow *any* surgical interference. This inflammation exists far more frequently than the profession have any idea of, and in a form readily overlooked. *So obscure is its existence sometimes that I have for years regarded the operations about the female pelvis, as a class, the most dangerous in surgery.*"

However patient the uterus is, and however kindly it bears the varied and serious insults to which it is subjected, there are times, especially during the periods of its physiological activity, when it resents all encroachments most violently. This, however, is well known, and may be excluded from our consideration. I plead for the greatest caution at *all* times, as serious accidents may result from the use of the ordinarily most harmless instruments, which are unaccountable, even in the hands of the most skilled.

The Uterine Sound.

I remember well how, in the winter of 1871–72, Prof. Braun, of Vienna, was demonstrating to his students the passage of the uterine sound into the Fallopian tube in a case of extra uterine pregnancy—peritonitis and death following the perforation of the uterus by the sound, as proven by the post-mortem examination. Whilst the experienced Professor supposed his sound in the Fallopian tube, it had pierced the uterine wall.

The same error occurred several times in one and the same case in the Berlin clinic in 1871 or '72. It was supposed, from the depth to which the sound entered, that the uterus was unusually large. The post-mortem examination, upon death of the patient from marasmus, showed that in each instance the fatty degenerated organ had been pierced by the sound, as evidenced by the localized inflammation which resulted, pointing out the course of the sound in each instance through the friable wall of the normal sized uterus.

Dr. Emmet informs me that he has had an attack of general cellulitis follow the most careful introduction of a probe into the uterine canal, and Dr. A. J. C. Skene tells me that he has once seen peritonitis follow its use.

Dr. Gregory, of our city, has not unfrequently seen pelvic inflammation following the introduction of the sound, or the use of simple applications, in the out-door department of the hospital, as patients are often obliged to walk long distances to their homes after such treatment.

Dr. Chadwick, of Boston, says: "I have had many attacks of inflammation from the use of the sound, sponge tents, etc., but these cases have been mainly in dispensary practice."

I myself have so far been so fortunate as to escape these accidents, which I consider in a great measure due to the fact that I always prefer to treat patients at their homes, and keep them on their backs for a time after each treatment; that I always resort to bimanual examination before introducing the sound, and enter upon treatment with the milder applications in order to satisfy myself as to the susceptibility of the patient. The same precautions were undoubtedly observed in the cases above related, and yet those unaccountable accidents occurred. The sound is a most useful instrument which we cannot dispense with, yet the more harmless bimanual palpation relieves us of the necessity of at once resorting to its use in every case, and should always precede the sound in order that this may be judiciously applied, or that we may determine the existence of such physiological or pathological conditions as would preclude its use. In a first examination the utmost care must be exercised.

CASE I. *Peritonitis following reposition of a retroverted, but moveable uterus, non-adherent.*—This patient was a married lady who came under the care of Dr. P. G. Robinson for severe neuralgic attacks, and who was suffering from retroversion and specific ulceration of the os. The symptoms readily yielded, and the erosion kindly healed under the use of protiodide of mercury in combination with iodide of potash. During this treatment Dr. Robinson had frequently replaced the uterus by means of the sound, as it was easily done, and held it in place by cotton tampons in the posterior cul-de-sac. After a month of such treatment the uterus retained its normal position and the patient left, remaining away three or four months, her health improving during that time.

Two days after her return she again sent for Dr. Robinson, complaining of great pain in back and thighs, which had come on suddenly after exerting herself in unpacking and the lifting of heavy trunks. Upon examination the uterus was found retroverted, but no traces of the former inflammatory condition or the erosion remained. Dr. Robinson, as usual, replaced the uterus, after introduction of the sound, without the slightest difficulty, and advised her to lie down quietly until he should see her upon the following day. This was at 11 A. M.; at 4 P. M. he was hastily summoned, and found his patient in a state of great nervous prostration, with high fever,

temperature 103°–104°, headache, nausea and vomiting; a severe chill, lasting from 2 P. M. until 2½ P. M. had preceded the fever. Physical examination revealed considerable abdominal distension and tenderness, with some slight tenderness about the cervix; these symptoms subsided within forty-eight hours under a treatment of opium with large doses of quinine, and steady improvement followed. The sound as a repositor has never been a very safe instrument.

Applications to the Cervix and to the Uterine Canal.

Case II. *Pelvic pain and inflammatory symptoms following an application of iodine to the uterine cavity.*—The patient, suffering from retroversion and chronic endometritis, had been for some three weeks under the care of Dr. Robinson; the uterus was moveable, easily restored, and kept in position by a tampon of cotton soaked in glycerine, and every six days an application of the compound tincture of iodine was made to the womb. Two or three hours after one of these applications the patient was seized with violent pelvic pains in region of the ovaries and the uterus; they were intense, but not accompanied by any decided evidences of inflammation, although there was some elevation of temperature, tenderness on pressure, nausea and vomiting. Within thirty-six hours the symptoms subsided upon the use of quinine, opium, and hot applications to the abdomen.

Dr. Paul F. Mundé, of New York, tells me that he has in two instances only, out of several thousand applications of iodine which he has made, seen cellulitis arise.

These are unfortunate results following the application of tincture of iodine to the cavity of the uterus; more surprising and more inexplicable still is the following case which occurred in the practice of Dr. Allen, and which serves well to caution us even in trifling applications, and in patients who have again and again undergone the same manipulation.

Case III. *Peritonitis and death in consequence of an application of tincture of iodine to the cervix.*—Dr. J. M. Allen, of Liberty, Mo., gives the details of this instructive case, as follows: "Mrs. C., æt. 23, of sound constitution, was delivered of her first

child in March, 1856; she made a good recovery and enjoyed fair health until the following December, when symptoms of uterine disease began to appear. Examination revealed a slight ulceration about the os and a retroversion, seemingly the result of a chronic metritis.

"Local treatment was at once inaugurated and continued for a period of nine months; during this time various remedies were used such as vaginal injections with sulphate of zinc, acetate of lead and tannin. Applications to the ulcerated portion of the cervix were made with nitrate of silver and dilute acid nitrate of mercury; the latter had a good effect, but was discontinued, and tincture of iodine substituted. The patient was rapidly improving, both locally and constitutionally, when, after one of these applications of iodine to the cervix, which were made every two weeks, without entering the cervical canal, the patient was attacked with peritonitis and soon died—without a known cause to account for the fatal issue."

Intra-Uterine Injections.

Case IV. *Death from intra-uterine injection of iodine made for the purpose of checking hemorrhage.*—In the fall of 1866, Dr. E. H. Gregory was consulted by a lady some 40 years of age, who suffered from frequent and profuse hemorrhages. Examination revealed an intramural uterine fibroid, and he accordingly determined to dilate in order to satisfy himself whether or no it could be removed.

Sponge tents were used, and when the os was fully dilated, Dr. C. H. Pope was called in and agreed with Dr. Gregory that the tumor was beyond the reach of surgical interference.

Intra-uterine injections had at that time been suggested and were frequently spoken of; Dr. Gregory decided to give his patient the benefit of this innovation, telling her of the attending dangers. When he called on the 8th of December, 1866, he found the weak, debilitated woman at the sewing machine, an effort she could but rarely make. He took her into an adjoining room, placed her in dorsal decubitus, and through the speculum injected some two ounces of an iodine solution (Tinct. Iodini 1: Aq. 6)

into the dilated cavity of the enlarged womb, using no force, the fluid returning easily; a moment later the patient, with pale and anxious face, raised herself into a sitting posture, and when advised to lie down she fell back, gasped a few times and expired, hardly five minutes after the injection had been made.

The coroner, Dr. Spiegelhalter, made the post mortem examination in the presence of Drs. Gregory, Hodgen, Pope, and Maughs. No fluid was found in the peritoneal cavity, and the cavity of the uterus itself was stained so little that some doubted the fact that the fluid had even penetrated so far; death evidently resulted from shock. The intramural fibroid was beyond reach.

Case V. *Metro-peritonitis and death following an intra-uterine injection of a warm and dilute solution of tinct. ferri chloridi.*—Dr. Theophilus Parvin, of Indianapolis, relates a very similar case; his patient was a married lady some 35 years of age, sterile, who was suffering from hemorrhage due to uterine fibroids which she was known to have had for twenty years.

At the time Dr. Parvin was consulted the hemorrhage was violent and uncontrollable, persisting even after free dilatation of the cavity and tamponing of the *os uteri;* other means having failed he injected very freely, into the uterus, a warm solution of muriate tincture of iron, one part to seven of water; the patient at once fell into a collapse which for half an hour was deathlike; she rallied to die within less than a week of the metro-peritonitis which followed.

Dr. Skene, of Brooklyn, writes me that he has in eleven cases seen violent uterine colic and shock follow the careful injection, into the uterine cavity, of tincture of iodine, water, mild solutions of nitrate of silver, and in one instance a metritis, from which the patient was years in recovering, after an injection of less than ʒss—30 drops of equal parts of tincture of iodine and opium.

These cases are but a few of the many, and notwithstanding all that may be said to the contrary, the injection of fluid into the uterine cavity is a dangerous proceeding, and neither the double canula, or the syringe with gutter, or any of the other ingenious instruments which have been devised to facilitate the exit of the injected fluid are sufficiently reliable in their action to make this method a safe one.

I entered upon my practice armed with all the various intra-uterine syringes, but their pistons have long since dried, although I have myself had no mishap as yet, and in former years I not unfrequently resorted to intra-uterine injections, especially with Braun's syringe.

A dilated os is a *sina qua non*, yet even with it, such notices as the following are not unusual: "Sudden death during the injection of perchloride of iron into the uterus; post partum hemorrhage, uterus not contracted; injection of a solution of liquor ferri in water, 1 : 6, with a Higginson syringe. After one or two syringes full slight discomfort, regardless of this a few more were injected, the patient cried out, grew ghastly pale, gasped for breath, became pulseless and died." *Obstetrical Journal of Great Britain and Ireland*, Jan., 1880, page 633.

Fischer, of Magdeburg, in an inaugural thesis, which appeared in Halle a. S. in 1879, has compiled fifty-four published cases of alarming, as well as fatal, results following intra-uterine injections and analyses them carefully, though not with the best judgment.

It is the injection of the cavity of the undilated uterus which is fraught with danger, and which is uncalled for, since so many other equally efficacious and less dangerous methods of treatment have been devised. The injection of the puerperal uterus (post partum or post abortum), though not absolutely without risk, is so invaluable a remedy, be it the hot water in post partum hemorrhage or the carbolized solutions in puerperal affections, that we must overlook the very slight dangers accompanying them; it is only against the injection of perchloride of iron for the relief of post partum hemorrhage that I would protest, as very dangerous, and, if any thing, less efficacious than the iron swab or the hot water douche.

Vaginal Injections.

The dangers of intra-uterine injections all will allow; but now one word with regard to the dangers accompanying the use of the ordinary vaginal syringe in the position usually assumed.

Case VI. *Intense pelvic pain and threatened peritonitis following the use of a Davidson syringe.*—Mrs. E. T., a healthy bru-

nette twenty-four years of age, the mother of two children, consulted me in the fall of 1875 on account of a slight back-ache and a leucorrhœa. I found the womb somewhat retroverted and lowered in the pelvis, with an endocervicitis which hardly seemed to warrant local treatment; I accordingly introduced a Hodge pessary, and advised astringent injections, one-half teaspoonful of tannin to two cups of water, night and morning.

At that time I was not yet in the habit of giving careful instructions as to the method of making the injections.

This patient, as most all do, used a Davidson syringe, while sitting over a chamber. One evening, towards 10 o'clock, I was hastily summoned by the excited husband. Mrs. T., while using the syringe, had been seized with a sudden and severe pain, a uterine colic, which was followed by intense suffering. I found my patient in great agony, the abdomen somewhat distented and exquisitely sensitive to the touch, most especially in the region of the uterus and the ovaries; pulse rapid and small; spasmodic increase of the pain. The subcutaneous injection of morph. sulph. gr. $\frac{1}{6}$ gave but little relief. Hot applications to the abdomen and opium in $\frac{1}{4}$ gr. doses slowly overcame the pain, and after midnight she fell into a restless slumber. The following day she felt sore, and remained quietly in bed. A speedy recovery followed.

Unquestionably a few drops of the injected fluid entered the uterus. Since this time I always close the central orifice of the vaginal nozzle, and direct the injection to be used in the recumbent or semi-recumbent position, as more comfortable for the patient, less tiresome, and more advantageous as securing a more thorough washing of cervix and vagina, which in this position can retain the fluid.

The habit of sitting or stooping over a vessel is exceedingly tiresome and trying, often indeed injurious, and at once neutralizes many of the good effects of the injection.

(I would refer to the excellent article on the subject by Dr. E. C. Dudley, of Chicago: The Hot Water Vaginal Douche; Certain reasons why its use is generally followed by failure and disappointment.—*Chicago Medical Gazette*, January 5, 1880.)

Case VII. *Vaginal injection, followed by severe metro-peritonitis; imperfect recovery.*—The following case occurred in the

practice of Dr. E. C. Evans, of Sedalia, Mo., some twelve years ago: A married lady, some thirty years of age, the mother of three children, had been using vaginal injections on account of a leucorrhea, of her own accord; no medicated fluid, simple warm water was injected, with a Mattison syringe, in the ordinary way, the patient seated over a chamber. While thus using the injection she was seized with an intense pain; she threw up her hands and fell off of the vessel on to the floor in a convulsion, in which condition she was found by Dr. Evans. The convulsions continued, with the patient in an unconscious condition, from that time, 9 P. M., until 10 o'clock the following morning. A violent metro-peritonitis followed, greatly endangering the life of the patient, and continuing for some ten days. She ultimately recovered, but has never been in robust health since, remaining almost an invalid in consequence of this unfortunate vaginal injection.

This case at once suggested to Dr. Evans the plugging of the central orifice of the nozzle, and since he has insisted on this he has not met with another accident.

These cases, which might unquestionably be duplicated again and again, will suffice to show that even so simple a proceeding as the use of the vaginal douche is not wholly free from danger, and that it should be cautiously and judiciously employed.

In order to obviate the dangers and the discomforts arising from vaginal injections as ordinarily used, I advise my patients:

1. To plug the central opening of the vaginal attachment.
2. To assume the semi-recumbent, better the recumbent, position, with knees drawn up.
3. Never to use a strong current, whether by the fountain or the bulb-syringe.

Sponge Tents.

Case VIII. *Peritonitis following the use of sponge tents.*—Mrs. John Miller, æt. 23, suffered from anteflexion and endocervicitis. I attended patient in September, 1873; began dilatation of the uterus on the 23d; on the 25th, whilst the uterus was well dilated by a large sponge tent, and whilst under strict orders to remain quietly in bed, this conscientious patient scrubbed the floors

and went about in the yard putting things to rights; consequently I found a diffuse peritonitis on the 26th. Although it yielded readily to treatment, she remained weak for some time afterwards, and but slowly recovered her strength.

CASE IX. *Death from the use of sponge tents.*—Dr. J. Taber Johnson, of Washington, D. C., writes: "About ten years ago I dilated a uterus preparatory to removing a fibroid before the class. I used three tents, one after the other, so as to approach the tumor more easily; with the third, metritis set in, peritonitis occurred, and in spite of the best treatment, with skillful and trained nursing, she passed hence. She had complete procidentia, the uterus having fallen far down. The case seemed a simple one; the organ had undergone much rough usage; she constantly bruised it in walking and sitting; two operations had been performed on the vagina to retain the prolapse, and the perineum had been restored, all without any unfavorable reaction. After she had borne all these operations she succumbed to the simple use of a sponge tent."

Death following the use of sponge tents.—Am. Journal of Obstetrics, August, 1874, p. 279.

At the meeting of the Philadelphia Obstetrical Society on the 4th of December, 1873, Dr. De F. Willard exhibited the uterus of a woman who had died after dilatation of the cervix uteri by sponge tents. The patient had been married for eight years but had never become pregnant. Three sponge tents were used in succession; the last, a smaller one, was introduced on a Friday, and, contrary to orders, the patient worked the next day, Saturday, at the sewing machine; on Sunday morning she suffered extreme pain, abdominal tenderness, fever, etc., and on the ninth day she died. Peri-uterine cellulitis, then general peritonitis; the parietal layer of the peritoneum was covered with lymph, and a small abscess existed on the left side of the uterus.

Dr. Ellwood Wilson reported an analogous case: on a Thursday he introduced a sponge tent for sterility and painful menstruation, and another on Saturday morning, which he left until Sunday morning. She seemed so well that he gave her permission to go down stairs, she, however, not only did this, but in the evening went to church. In the night she had a chill—on Monday peritonitis set in—on Tuesday she died.

Dr. H. Lenox Hodge had also seen a fatal case: the first tent was introduced on Saturday; the second and third on Sunday and Monday; before the removal of the last she complained of acute abdominal pain, and died of peritonitis four days after. An autopsy revealed a double ovarian tumor.

Dr. Albert H. Smith reports a death on the third day following the use of the scoop after dilatation by sponge tents. He never hesitates to use tents, even in his office, the great danger is from their repeated use; he does not hesitate to use a second tent but fears a third.

Dr. Goodell had one case of death to record following the use of three sponge tents in a case of intromural tumor, which was manipulated by a number of physicians who were present.

Every gynecologist, the ablest and most skilled, has seen dangerous and fatal results following the use of sponge tents; thus Dr. Parvin says: "Sponge tents have occasionally given me great anxiety as severe peri-uterine inflammation followed their use, and twice this inflammation terminated in abscess, but never in death." Dr. Skene has seen cellutitis in three instances, and Dr. M. A. Pallen, of New York, in 150 cases in which he used tents, saw two deaths from metro-peritonitis, 16 cases of pelvic cellutitis and one of metritis with abscess. (Pallen, Incision and Division of the Cervix Uteri, *Am. Journal of Obst.*, July 1877, p. 364).

Dr. Mundé, of New York, informs me that he has twice seen acute parovaritis follow the use of laminaria tents.

Dr. T. G. Thomas tells me of four deaths, in his practice, from the use of sponge tents; and Dr. J. R. Chadwick of one death following the use of a tupelo tent to facilitate conception in a sterile woman.

This of course is only the experience of a few of the busiest gynecologists who have so frankly and so kindly given me the history of their mishaps that they may serve as a caution to others. The most instructive case, however, the one which conveys the most pointed warning is (Case X) one which occurred in the practice of Dr. Emmet, and I will quote the words of his letter: ". . . I have a fellow feeling for you as I have recently lost a patient from peritonitis, brought on by her own imprudence, after the use of a sponge tent; contrary to orders she got up and walked about in her bare feet. . . . My care after the use of sponge

tents has frequently been ridiculed, and by men who do not hesitate to introduce them in their offices and then allow the patient to return home.

"I keep such cases in bed and place them in charge of a nurse so that they cannot commit any imprudence, and yet I cannot always guard against the danger. This very case which died was guarded by the nurse, ordered to lie quietly in bed and told the consequences of any imprudence. Notwithstanding all this, during a few moments, when the nurse was obliged to be absent from the room, this patient got up and in her bare feet walked over an oil cloth into the adjoining room; that very night she had a chill, and in less than a week she died from the intense peritonitis which followed."

Tents, whether sponge or lamineria, must be used with the greatest care, and the following points strictly observed:

1. The patient must remain quietly in bed during the entire period.
2. Rapid dilatation should be employed and if possible not more than two tents used, the tents only remaining until fully expanded.
3. Warm, cleansing, or disinfecting injections must be used by the patient in her bed, and the uterine cavity must be cleansed by the physician before the introduction of every tent.

It has been my custom to begin with the insertion of a slippery elm tent, upon the following day I have stretched the canal moderately with the dilator and forced in the largest possible sponge tent, which I could generally follow by the largest size in twelve hours. Unless it be an imprudence, it is generally the third tent which does the mischief.

Goodell, in his usual happy vein, explains this: "The mischief is done, not by the first tent, or the first batch of tents passed into the cervical canal, but by those put in at a second or third visit; the first tent irritates and congests the cervix; its removal abrades the mucous coat, and from this raw surface is absorbed the fœtid discharge or the septic material generated by the succeeding tents."

III. DANGERS OF THE MOST TRIVIAL OPERATIONS UPON THE UTERUS.

Care and cleanliness, if not Listerism, are necessary in even the most trifling uterine operations, and the strictest surveillance should be exercised over the patient during the after treatment, even if this consist in nothing more than rest—absolute rest and cleanliness: this is all the more necessary as a patient after a slight operation may suffer neither fever or pain; on the contrary the happy effect of the operation may already have shown itself—she is free from all annoying aches and pains of which she complained before the operation, and considers herself accordingly well and at liberty to move about as she pleases.

I have always given my patients the strictest injunctions in this respect, and once have I seen death follow disobedience of these apparently ridiculously strict orders, and once I almost lost a patient from a trifling exposure caused by a change of weather which I had not anticipated.

It has afforded me great satisfaction to see my apparently extreme views so thoroughly corroborated by a gentleman of Dr. Emmet's experience, who, in a recently received letter, says: "When I operated in the hotels and boarding-houses I frequently lost patients from the most trifling operations, as I could not guard against their own acts of imprudence. This led me to operate only in my private hospital, where I could take every care and have the patient watched; the result has been most satisfactory."

Rest and careful attention during the after-treatment are extremely important features; and yet, with all care, dangerous and fatal results may occur. Very few of the text-books which you may consult before attempting an operation will tell you anything of its dangers, unless it be an ovariotomy or a similarly serious undertaking. They will tell you how to operate, but will not detail the minute precautions to be observed in the operation, or counsel you how careful to be of the patient after she has been operated on, as she ceases to be an object of interest when once the aspiring surgeon has cut.

I have called attention to the necessity of cleanliness, if not of Listerism during the operation, and of rest after it, but must add

that among the most important precautions, before even engaging in the operation, is the exclusion of septic influences in the widest possible sense of the word. It is not only dangerous for the surgeon to operate if he himself is in attendance upon a case of puerperal or other septic fever, but he even takes a great risk if he operates during the prevalence of such an epidemic, most so in the spring of the year; such at least has been my experience.

It was in March and April, 1880, that I lost a patient from puerperal septicemia, without any apparent infection, and that those two simple operations Cases XIV. and XVII., resulted so badly. Others have made the same observation, thus Dr. Emmet writes me: "I have had trouble from the most simple operations, and particularly in the spring of the year if there is much puerperal fever." Dr. Marcy, of Cambridge, writes: "We have had an unfortunate epidemic influence in our vicinity this last spring (1880), so pronounced that several of us for some weeks gave up all the surgery possible."

Dr. Baker, of Boston, says that at this same time he lost his own case, and that he understands that Dr. C. B. Porter lost a case from operation for rupture of the perineum in the Massachusetts General Hospital: "At that time many obstetricians were complaining of the hard getting up of their cases, and I consequently suspended all operations, as well as the use of tents, both in hospital and private practice, for six weeks, when I was informed by the Board of Health that the hygienic condition of the city was again good."

It is this hygienic condition, dependent upon certain atmospheric or telluric influences, which we must take into consideration, as well as the danger from direct personal infection.

Men are in the habit of reporting their successes, not their failures; and even Hegar, the skillful German surgeon, quietly buried his first case of extirpation of the ovaries, thus leaving to the bold and successful American, Robert Battey, the credit of the new operation which now bears his name; not until Battey had published a series of successful cases did Hegar operate again, and then he claimed that fatal case, which he first sought to hush, that it might now give him precedence. So all do. Porro would probably never have claimed his operation had his patient died; he would not have told of his experiment any more than Hegar did.

The more desperate the operation, if successful, the more ready is the surgeon to report it; these successful cases make up the medical literature of the day; of failures or of fatal results we hear but little, certainly not in minor operations, and such wonderful results are achieved in this present era of antiseptic surgery that every practitioner deems himself justified in a free and often careless resort to the knife, the curette, and especially the less dangerous instruments, which accordingly often prove to be instruments of death.

Scarification of the Cervix.

Case XI. *Death in consequence of scarification of the cervix.*—As the simplest of all operations in which the knife is used we may certainly regard the scarifying of the cervix, and this unfortunate result which followed so trivial an operation at the hands of so able and skillful a man as Dr. Parvin, of Indianapolis, may well be a warning to all. To use Dr. Parvin's own words:

"The patient was a delicate lady, twenty-four years of age, married, but sterile; she suffered from chronic metritis, with scanty and painful menstruation. I scarified three or four times with marked benefit, and, so favorable was the result, that I did it once too often; within thirty-six hours of my last scarification a peritonitis set in which marched rapidly to a fatal issue."

How is this case to be explained?

Incision of the External Os.

Case XII. *Death from pelvic celulitis and general peritonitis in consequence of exposure, five days after a slight bilateral incision of the external os.*—M. M., æt. 26, servant, had suffered for many years more or less from back-ache and dysmerorrhœa, in consequence of endo-cervicitis in an anteflexed uterus with pin-hole os; had been treated off and on by various physicians but without receiving more than a temporary benefit; rest gave her the greatest relief, but as soon as this otherwise strong and healthy woman resumed work the back-ache, ovarian pain, etc., returned.

I had proposed to enlarge the external os by bilateral incision

in order to open the uterine cavity, to enable me to resort to local applications, as well as to permit the free escape of the menstrual fluid.

The operation was performed with the assistance of Dr. Evers, at the Women's Hospital, on the 3d of December 1879, five days after cessation of the menstrual flow; I made a trifling bilateral incision, cleansed the wound with hot water, inserted iron cotton to distend it and kept this in place with a cotton tampon.

The patient suffered some little discomfort from the tampon which disappeared upon its partial removal on the following day: she did very well, had no pain, and no febrile reaction whatever; December 6th, the iron cotton was changed and a carbolized wash used; the strictest orders were given that the patient should remain in bed and not even sit up in her bed, but on the fifth day after the operation, whilst the nurse and other patients had left the ward she quickly got up to have a wash; unfortunately she found no fresh water in the pitcher, so in her slippers and dressing gown, this patient, who had been ordered to keep to her bed, went out into the yard to pump water for herself, then she had a nice wash, and in the afternoon a severe chill—high fever all night. On the following day, Tuesday, December 9th, I found her suffering intensely from a well developed pelvi-peritonitis, which, however, yielded in a few days to an energetic treatment of opium, quinine and constant hot applications; cotton was removed from the incision and occasional injections of hot carbolized water seemed to afford comfort.

December 13th, fever and pain had disappeared, she rested easily and began to take nourishment; improved rapidly, nothing to complain of; on the 16th, we were obliged to remove her to her home over one mile distant, as the hospital was given up. The weather was pleasant, and she was carefully wrapped up and taken home in a carriage; the driver, contrary to orders, seems to have driven at a sharp trot over the rough, recently frozen ground; she was a good deal jolted and I was soon summoned to find her in a worse condition than before. General peritonitis supervened upon a violent parametritis; leeches only afforded the relief which was no longer to be obtained by opium or by morphine injections; quinine was vomited but retained by the rectum. Dr. Hodgen

kindly saw the patient with me several times, but notwithstanding all that could be done she died on the 22d of December, nineteen days after a trifling operation, which many would perform on an office patient, a victim to her own imprudence.

CASE XIII. *Death in consequence of a slight incision of the posterior lip. Related by Dr. J. Taber Johnson, of Washington, D. C.*—"Patient was a multipara, who had not born a child for ten years and suffered from terribly painful menstruation. Diagnosis, hypertrophic elongation of the cervix and conical-pin-hole os. She declared that each period was more painful than the birth of a child. One of our best surgeons saw her with me, and we determined to amputate the cervix, but as *she was too near her period* this operation was necessarily delayed, and by way of encouragement, to show her how much good would result from even a very small operation, we merely incised the posterior lip of the cervix, and only part way through at that. On the following day I passed a small black French bougie so as to keep the wound open; neither the operation or the bougie gave her any pain; the next day she had chill after chill, and to make a long story short, inflammation then travelled rapidly upwards, involving one portion of the uterus and peritoneum after another, until this unfortunate woman had general peritonitis in addition to the pelvic cellulitis. I attended her faithfully about four months, many times twice daily; with careful attention and skillful nursing she slowly recovered."

Dr. Goodell, of Philadelphia, has had a death from an almost equally simple operation, a posterior section of the cervix.

Barring the numerous fatal cases from the once so frequently performed bilateral incision, I can now hear of none beyond those done in office practice, and accidents in consequence of Sims' antero-posterior section seem still more rare, probably as this has been regarded as a more serious operation, and operators have, as a rule, followed the careful directions of Dr. Sims; no accidents at least have been reported to me in consequence of this operation by anyone but Dr. Sims himself, who says: "I have lost two cases from incision of the cervix uteri, both of which have been published." These he has fully discussed in Vol. III of the Transactions of the American Gynecological Society in his article on Treatment of Stenosis of the Cervix Uteri, p. 54.

Dr. M. A. Pallen, of New York, publishes two deaths from incision of the cervix uteri in his paper on Incision and Division of the Cervix Uteri for Dysmenorrhœa. *American Journal of Obstetrics*, July 1877, p. 364.

Dr. Thomas says that he has several times seen peritonitis or cellulitis follow section of the cervical canal but never death.

Operation for Laceration of the Cervix.

Case XIV. *Death from general peritonitis following operation for a slight unilateral laceration of the cervix.*—Mrs. H. R., from Tennessee, æt. 26, suffered from backache, ovarian pain and general weakness in consequence of a slight left lateral laceration of the cervix uteri; was unequal to any exertion, a short walk or an attempt at work increased pains excessively; the uterus was movable, still somewhat enlarged, but in much better condition than when I last saw the patient in March, 1879, she having undergone a very thorough preparatory treatment at the hands of Dr. Thompson, her attending physician. The menstrual flow ceased on the 15th of March, 1880, but vaginal douches were used and the bowels freely moved; six days later, on the 21st, I operated, with the assistance of Drs. Holland, Hypes, Schenck, Nelson, and Thompson of Tennessee. The operation was a trifling one, borne well without chloroform, performed under the douche of hot carbolized water, four silver sutures were introduced. No reaction whatever followed; pulse and temperature remained normal; a few hot water injections removed the slight discomfort caused by the sutures on the third and fourth days; she was impatient to leave the bed as she felt completely cured. It was indeed remarkable how all former symptoms suddenly disappeared after the operation, ovarian pain and backache were gone, in short, as she expressed it, she felt "as if she had a new back."

March 28th, the sutures were removed on the seventh day, but only partial union had taken place, the lateral half or two-thirds having united, and there was a slight return of former symptoms upon removal of the sutures. I determined to pare the edges again and repeat the operation; I considered this a proper course to pursue as there was no uterine tenderness whatsoever, no en-

largement, nothing pointing to an inflammatory condition. The menstrual flow was not expected for five or six days and she would not wait until this had passed over; if she were to undergo a second operation, it must be done at once. I accordingly operated on the 3d of April, with the assistance of Drs. Holland, Hypes, and Thompson, observing the same precautions as before, three sutures served to unite the wound.

Intense pain followed the operation, and this steadily increased, fever soon came on, vomiting and abdominal tenderness told of a severe general peritonitis to which she succumbed on the morning of the 8th, not quite five days after this slight operation.

The menstrual flow appeared unexpectedly and prematurely on the 5th. Hot applications and morphine subcutaneously afforded her relief, but quinine per rectum and subcutaneously could not stay the fatal course of the disease.

The patient was under the constant care of Dr. Thompson, and was seen in consultation by Drs. Hodgen and Prewitt; and although not one could detect any symptoms of septicemia, I would mention that three weeks before I had lost a patient of puerperal septicemia in the same hospital.

The first and successful operation was performed two days after this death—recklessly, I will acknowledge,—but as this operation passed off so well, I deemed myself perfectly safe in attempting a second one so much later. Did this fatal accident result from the infected atmosphere of the building, or from the proximity of the menstrual congestion, or from a trifling incident which has escaped my memory? As my own vulsellum forceps had been loaned to a fellow-practitioner, I made use of an old rusty pair which I found in the hospital. Could these have been the cause of the infection?

The post-mortem revealed a general peritonitis; the sexual organs in a healthy condition and apparently not the source of the inflammation. What was the cause of this unexpected result?

Case XV. *Death from septo-pyemia nine days after an operation or extensive bilateral laceration of the cervix.*—Dr. W. H. Baker, of Boston, writes me: "About ten days after I had lost one of my ovariotomy cases from septic peritonitis, I operated for an extensive bilateral laceration of the cervix in a widow, 59 years of age, with nearly complete procidentia. My reason for operating

was, that when the uterus was replaced within the vagina, and any means of supporting it there were used, such appliances tended to separate the lips of the cervix and caused much irritation. It was then simply in order to make it possible to adjust a pessary without irritation that I did the operation. She had ceased menstruating entirely one year before; and when the operation was done there seemed to be so little vascularity to the parts that I was almost led to question whether they possessed sufficient activity to insure union. She died of septo-pyemia in nine days."

Case XVI. *Death from general peritonitis four days after operation or an extensive stellated laceration of the cervix.*—Dr. H. O. Marcy, of Cambridge, Mass., operated on a delicate anemic lady of 26, who had had a severe delivery four years before, and had not been well since; profuse menstruation, leucorrhea, backache, etc. April 12th the edges were pared and united by six silver sutures; was comfortable without opiates until the following afternoon, when slight pelvic pain began to appear; restless during the night of the 13th, although opium was used freely; temperature still normal. The first and only chill appeared on the 14th, when pulse and temperature began to rise; at noon she was decidedly worse; pains were intense, and by evening the countenance assumed a pinched expression; she was delirious and unconscious; 15th, slowly sinking, peritonitis well developed, urine highly albuminous, containing abundant granular casts; 16th, 10 A. M., temperature 107°, pulse 160, unconscious; temperature reduced to 104° and below, thirst relieved by ice, etc., yet at 4 P. M. she died.

The post-mortem examination showed uterus and ovaries normal, but the pelvis filled with pus; acute parenchymatous nephritis and general peritonitis existed, and the intestines were firmly agglutinated—a condition similar to the one in my case, where the peritonitis was, however, less violent and no nephritis existed.

Dr. Marcy deemed himself "surgically clean" at the time of the operation, and used no other antiseptic precautions than carbolized vaginal injections every three or four hours during the first two days.

These cases will suffice to demonstrate that this operation, which has been so recently given to us, and which has already proved so great a blessing, is not without its dangers, and demands that the

operator carry out in detail all the precautions recommended by its originator in his valuable work; and even then fatal results will surprise us.

The Curette.

Case XVII. *Pelvic peritonitis in consequence of exposure four days after curetting.*—Miss M. M., æt. 21, a young lady of good constitution, who had always enjoyed unusually good health, free from all the ordinary female complaints, was annoyed by a slight discharge from the vagina, which she had noticed since the fall of 1878. The brownish yellow discharge, though not troublesome, was sufficient to slightly stain her clothing, and she was anxious to be rid of it.

I was consulted in July, 1879; finding an erosion around the os, and some little congestion of the cervix and the vaginal walls, I made a single application and advised astringent injections. These were continued for months without any apparent benefit beyond the cure of the erosion.

Determined to relieve my patient from this, though trifling annoyance, which was evidently due to a congested or hypertrophic condition of the uterine mucosa, I treated her in January and February, 1880, with local applications, also to no purpose. Determined to discover and to remove the cause of the trouble, I finally concluded to dilate and examine the uterine cavity. I accordingly introduced a sponge tent on the 8th of March, followed by a second larger one on the 9th, and on the 10th examined the cavity with Thomas' wire loop, and the soft, velvety feel showed me a thickening of the mucosa. I removed a considerable portion with Simon's (sharp spoon) curette; then made an application of iron to the cavity; pain soon ceased, and when I visited the patient on the 12th, two days after the operation, found her quite comfortable. I made another application of iron, and advised hot astringent injections. I neglected to direct *how* they were to be taken; and, as my patient felt perfectly comfortable and well, she got out of bed, walked in her stocking-feet to the stove, and there took her injection.

The weather was raw, and a disagreeably cold west wind blowing; the room was a very large one, with a southern exposure,

with three large windows and two doors, one into a cold room, the other into a cold hall; close by this hall door, through the cracks of which blew a perfect gale, was my patient's bed; and as she got up, put on her stockings and walked to the stove, she was constantly in a cold draft.

On the morning of the 14th, after taking her injection, she began to feel chilly and to complain of cold feet; on the next day I found her in high fever, with abdominal tenderness. A severe chill followed in the night, and on the 16th, notwithstanding all measures resorted to, a severe pelvic peritonitis had fully developed; the stomach rejected both food and medicine, the pulse ranged between 130 and 140, and for three or four days the worst was to be feared. A good constitution and careful nursing finally turned the tide, and a young life was saved which had come so near falling a victim to a trifling carelessness some days after a slight operation on the uterus.

Dr. P. F. Mundé informs me that he has had a case of cellulitis after dull curetting, and Dr. Skene that one of his patients died of peritonitis after the use of Sims' curette, employed to remove polypoid growths.

The sharp spoon, as well as that apparently very harmless, dull curette, must be handled with the same care as the more formidable instruments.

Removal of Small Pedunculated Polypi from the Uterine Cavity.

Case XVIII. *Death in consequence of the removal, with the scissors, of a small pedunculated polypus from the cervical canal.* —Mrs. ———, æt. 48, the mother of several children, (the youngest of whom was 8 or 10 years of age,) none of whom very young, had for over a year suffered more or less from uterine hemorrhages; flooding, not only during menstrual period, but also at other times.

An alarming hemorrhage, more profuse than usual, induced her to send for Dr. H. H. Mudd, who found his patient very feeble, pale and anemic; the cervix was normal, not unusually soft or thickened; the os small, not patulous, no ulceration or protruding tumor, nothing to account for the hemorrhages.

Dr. Mudd dilated with laminaria, but still unable to detect any abnormity, inserted a sponge tent in order to thoroughly explore the cavity. Examination now revealed a small polyp, not over five-eighths of an inch in length attached by slender pedicle not one-eighth of an inch in diameter, a little below the internal os; this was easily *snipped off with the scissors*, giving no pain and causing no bleeding, nor had the dilatation by laminaria and sponge tents caused any suffering.

There was no evidence of any disturbance until perhaps thirty-six hours after the removal of this small growth. Dr. Mudd operated Saturday afternoon, or Sunday morning; on Monday morning an alarming chill came on, this was followed by a high fever, nausea and vomiting, and thirty-six hours later, on Wednesday morning, the patient died, three days after the removal of a small fibroid with thread-like pedicle—and I would call especial attention to the fact that in this case the pedicle was cut with the scissors, and not twisted off with the forceps.

CASE XIX. *Death from removal of a small, pea-sized, polypus from the cervix three days before the appearance of the menstrual flow.*—A lady, 35 years of age, unmarried, in apparently delicate health, consulted Dr. Wm. L. Barrett, of St. Louis, on account of a menorrhagia which had existed for some time, but was becoming very serious of late. Examination revealed a small fibroid growth, no larger than a pea, not pedunculated, and attached to the lining membrane of the cervical canal just within the external os, and a subserous fibroid of the size of a hazelnut in the fundus.

As the removal of the small polypus was so very trivial an operation, and the patient, who came from the interior of the State, was exceedingly anxious to be operated upon, Dr. Barrett at once twisted off this little excrescence with the dressing forceps, though knowing that the menses were expected in a few days. The point of attachment was touched with Churchill's iodine, perhaps also the greater part of the cervical canal, but the cavity of the uterus was certainly not entered.

Every precaution was taken, the patient was kept in bed after this trifling, painless and bloodless operation, the vagina thoroughly cleansed by repeated washing, and everything went well for two or

three days, when the menstrual flow appeared; with it came a pelvi-peritonitis which, notwithstanding the greatest care and attention, resulted in a general peritonitis which proved fatal within five or six days.

A post-mortem examination was made, and this established the fact that the difficulty had originated in an endo-metritis which passed through the Fallopian tubes to the ovaries, which were enlarged and congested; from this point the inflammation had extended over the entire peritoneum.

CASE XX. *Peritonitis and death following the removal, with the dressing forceps, of a small mucous polypus from the fundus uteri.*—For a brief time the fair name of so skilled and so careful a man as Dr. Emmet was attacked by envious and malicious men, and by the friends of an unfortunate girl, on account of one of these almost inexplicable accidents, as he tells me; to use his own words: "Some sixteen years ago a single lady about twenty-two years of age, and apparently in perfect health, but suffering from an intensely painful menstruation which had existed for the past eighteen months, consulted me as to the propriety of marriage, fearing sterility."

"Upon my first examination I found an anteflexion of the body of the uterus with an ill-defined thickening in the left side of the fundus, which I regarded as of little importance from its limited size. I advised division of the cervix backward as was then my practice. I *now* know that the flexior, as well as the dysmenorrhœa, must have been caused by an old cellulitis which obstructed the circulation, and had the cervix been divided a fresh attack of the inflammation must have appeared."

"At a second examination in my private hospital I felt a small sized mucous polypus, about the size of a large pea, projecting from the os; without any especial preparation or thought as to the consequences, I introduced a Sims' speculum and, with a pair of forceps, pulled the growth away. The operation caused neither bleeding nor pain, and I expected to have divided the cervix on the following day, but in the night she had a violent chill followed by cellulitis, and then general peritonitis, from which she died within five or six days."

"This case is forcibly impressed upon my recollection, yet I

did not fully appreciate the cause and effect for years after, nor did I do so until I had several cases of cellulitis following equally slight causes."

Dr. Chadwick, of Boston, has had one death in consequence of the removal of a fibroid polypus from the cervical canal.

These cases clearly demonstrate the danger of hastily attacking these simple little growths which sorely tempt the surgeon and give promise of becoming such yielding and easy victims. They should never be simply twisted off; the uterine canal should be dilated, at least cleansed, the pedicle cut off with the scissors, and, with the observance of the greatest cleanliness, the stump should be cauterized with nitrate of silver, with tincture of iron or with iodine, as Emmet suggests, and the patient sent to bed.

Dr. Emmet, guided by his experience, gives a graphic description of these apparently harmless little growths and their treatment, on p. 616 of his second edition, where he says: "The natural impulse is to tear the growth away; this can be readily done, but if force be used an attack of cellulitis will be more likely to result than after the removal even of a large pedunculated polypus. I have had cellulitis occur several times from twisting off such a growth. There certainly exists a closer relation between the mucous membrane of the vagina, the uterine canal, and the peritoneum and connective tissue of the pelvis than is generally supposed."

The danger seems to me to spring less from the use of force than from the transmission and absorption of inflammatory and septic products by a lacerated stump.

Perineorrhaphy.

Case XXI. *Death in consequence of trifling operations for lacerated perineum in the practice of Dr. E. H. Gregory*—The most striking of these was that of a lady, twenty-two years of age, who had received a slight rupture during the birth of her first child. She was in excellent health and did not suffer from the trifling laceration, but it was deemed best to repair the injury; Dr. Gregory accordingly operated two or three months after childbirth

with the assistance of Drs. Pollak, Moses, and Carson. The operation was a very simple one, hardly more than a single square inch of tissue being denuded. Twelve hours after the operation the temperature rose to 100°, and on the fifth day this young, healthy and beautiful woman was placed in her coffin.

CASE XXII. Another similar case was that of a lady of thirty, the mother of several children, upon whom Dr. Gregory operated for laceration of the perineum, some two months after confinement, in the presence of Drs. Hodgen and Lemoine. A fever greatly resembling a urethral fever made its appearance soon after the operation and terminated fatally in less than a week.

I am informed that a similar case, death from operation for laceration of the perineum, about six weeks after confinement, occurred in the service of Dr. C. B. Porter, at the Massachusetts General Hospital in Boston.

Fortunately, before returning proof, I have received a detailed report of this case from Dr. Porter, through the kind offices of Dr. C. W. Cooper, to whom I am under obligations for services kindly rendered.

CASE XXIII. *Death from septicemia sixty-six hours after perineorrhaphy.*—Mrs. W., æt. 23, quite fleshy and apparently healthy, entered the Massachusetts General Hospital March 24, 1880, four months after having been delivered of her first child, weighing twelve pounds.

March 25th the rupture, which extended half an inch into the rectum, was successfully closed by Dr. Porter; three deep wire sutures serving to unite the perineal body, whilst the mucous membrane of the rectum was adapted by cat-gut, and that of the vagina by fine wire sutures, which were also used between the deep ones.

Upon the following day the patient was comfortable, and retained some liquid food, although she began to vomit.

March 27th the patient was very restless, and the abdomen tympanitic and largely distented; at 1:30 P. M. feverish; temperature, after sponge bath, 101°; pulse and respiration increased, but not alarming. Later in the evening a decided change took place; the upper extremities were cold, and the pulse very rapid and feeble; the patient now failed rapidly, and notwithstanding all care, died at 5:30 A. M. on the 28th—less than three days after the operation.

During the entire sickness patient could retain almost nothing on her stomach.

Post-mortem examination, twenty-eight hours after death, showed the surface of the wound greyish, not united, but the neighboring parts apparently healthy; there were no evidences whatsoever of peritonitis, and no pathological appearances beyond a cloudy swelling of the liver and kidneys.

Septicemia was assigned as cause of death.

Dr. T. G. Thomas tells me that he has had a death from perineorrhaphy in a simple case of partial rupture.

These last mentioned cases I have referred to as they indicate the danger which attends any interference with the female sexual organs even remote from the uterus, to which most abused organ I had intended to confine my remarks. I will not enter upon such operations upon the uterus as seem to be even somewhat serious or of more than slight importance; thus I do not refer to the antero-posterior section, to the amputation of the cervix, and especially the unfortunately frequent, yet rarely fatal, opening of the peritoneum by the ecraseur in this operation. To all such rather more difficult or important (yet in themselves not dangerous) operations I shall make no reference, although a number of fatal cases have been reported to me.

I am greatly indebted to kind friends for the encouragement I have received from them, and for the valuable assistance they so cheerfully gave me in placing at my disposal the unfortunate, and hence to others most valuable, cases in their rich experience. I am all the more thankful to them as the information I asked for relates to those cases which many of our professional brethren would prefer to ignore. The profession, I am confident, will join me in expressions of gratitude to these unselfish men.

RESUMÉ.

I trust that the object of this paper will not be misconstrued. It is not to prevent the physician from informing himself of the condition of his patients by every means at his command, or to deter him from resorting to the knife when it may be the means of relief to an anxious sufferer; but it is to warn the surgeon that his exam-

inations, that the simplest and most trivial operations, are fraught with danger; in short that every, even the slightest, interference with the female sexual organs must be well considered and most judiciously undertaken, and then only after the exclusion of certain physiological and pathological conditions.

I have thought to confirm the caution of the experienced, though ridiculed by some, and to warn the meddlesome and thoughtlessly rash, and more especially since "a sudden madness seems to have seized a large portion of the profession to become specialists in gynecology," to quote the words of an eminent specialist who is in a position to know.

These lines have not been penned in a spirit of timidity, or in a moment of discouragement. I have never hesitated to undertake any operation which a conscientious man would dare venture upon, and I have at this moment two patients lying in St. Louis upon whom I have performed abdominal section—from one I removed two ovarian cysts and five or six cysts of the liver—yet both are recovering without a palpable elevation of pulse or temperature, without any discomfort whatsoever. It is this remarkable and striking contrast, this wondrous harmlessness of those most serious operations, and the alarming and venomously fatal results of the most trivial interference with the female sexual organs, which has misled men, and which has suggested these thoughts to me.

In view of the facts given, we are justified in the following *conclusions*, which I will not here elaborate, as they readily suggest themselves by a perusal of the cases which I have cited:

1. Uterine manipulations necessitate the greatest possible caution, especially in first examinations; but even the oft-treated organ may, in an apparent freak, under unknown conditions, resent a most trifling interference. (Cases III. and XI.)
2. No manipulation or operation is without danger; and, before attempting either, certain physiological and pathological conditions must be guarded against—menstruation, pregnancy and involution on the one hand, and the remnants of cellulitis and peritonitis on the other, above all, acute affections. These precautions may be often neglected,

but now and then a punishment swiftly follows. (Cases XII., XIV., XIX., XX., XXI., XII.)

3. During operations we must moreover observe:
   a. The sanitary condition of the city. The existence of epidemics, especially of puerperal fever, erysipelas, or diphtheria decidedly contraindicates operation; and it seems that the spring of the year is most fraught with these dangers. (Cases XIV., XV., XVI.)
   b. Absolute cleanliness, if not Listerism in its details, as far as applicable.
4. After operations—I am still referring to the most simple—the patient must be, at least for a reasonable time, confined to her bed. Upon this the surgeon must insist, however ridiculous it may seem to the patient, without ache, pain or discomfort of any kind. (Cases VIII., X., XII., XVII.) Even after receiving uterine treatment, patients should observe a brief period of rest.

DISCUSSION.

DR. GEIGER—This has certainly been one of the most interesting and profitable papers read before this meeting. There are, indeed, two sides to every question, and, as Dr. Engelmann has just stated, we, as a rule, have only the reports of the successful cases, and unless the failures are reported and mistakes are pointed out we cannot progress. Dr. Engelmann with rare honesty has made a beginning in the right direction. I wish to add a few cases in point from my own practice.

The first is a case of chronic uterine catarrh, in which I injected a solution of tincture of iodine and carbolic acid. Before the woman could leave the table she fainted. Extreme prostration set in, followed by a cold sweat. I thought that the patient would die before she could be removed from my office. She was kept there for some time stimulated with whiskey, and finally rallied. This injection was followed by a severe attack of peritonitis. We are most liable to make our mistakes in those cases which come from a distance. They come to our offices and it is the wish of patient and physician that a thorough examination be at once made, and ere we know it we have trouble on our hands. You are all aware of those chronic cases of uterine disease which go from physician to physician and are constantly under treatment. This was only the second time the patient just referred to had consulted a physician, and a carefully made injection almost caused her death.

I will also mention a case of vesico vaginal fistula operated on by Dr. J. M. Richmond and myself two years ago. The fistula was quite small and the patient was in remarkably good health. She was put under chloroform and the fistula

closed with wire sutures. She was confined to bed about one week and did very well. A short time before she left our city we made a final examination, and finding a small opening remaining this was cauterized with nitrate of silver and the patient sent to her home, a distance of sixty miles. Peritonitis at once set in, and in four days she died. Whether it was due to infiltration of urine, or whether it was the mechanical effect produced, I am not able to say.

Another point I wish to refer to is the condition of the womb during pregnancy and during the existence of tumors. About two years ago I was employed to make a post-mortem examination on the body of a young woman upon whom an abortion had been produced, or was supposed to have been produced, by a professional abortionist. The body, which had been buried several days, was taken up, and on opening it I found a rupture in the fundus of the uterus large enough to pass three fingers through. This man, who had produced abortion no less than two hundred times, and finally ended his life of crime in the penitentiary by his own hands, stated to one of his friends that he had used no violence whatsoever in this case, and that a wire loup was the instrument used; but in what way this enormous rent was made I cannot say.

Dr. G. A. Moses—The subject presented by Dr. Engelmann is one well deserving the care he has bestowed upon it, and worthy the attention of the general as well as the special practitioner, as by proper precautions as to time and existing conditions most of the disasters alluded to may be averted. The immediate closeness of a menstrual epoch, the period of involution and of lactation, should, I believe, forbid any operative procedure upon the sexual apparatus not urgently demanded. The existence of any remnant of pelvic inflammation also bars not only surgical operations upon the pelvic contents and their vicinage, but under ordinary circumstances prohibits the use of the uterine sound. I have known a vaginal pessary to relight a cellulitis.

Dr. Emmett, in his recent work upon gynecology, frequently urges the necessity of this caution, and is most careful to insist upon prolonged quiet and rest in bed after any operative interference with the uterus, which only the careless or inexperienced have the audacity to neglect. Emmett and Goodell even object to the old Simpson sound on account of its inflexibility, and entirely condemn its use. The latter author especially urges an excellent law, that the uterine sound should never be used at the first examination of a patient unless there should be an absolute necessity for immediate exploration.

The only fatal result I have witnessed from the frequently performed operation for laceration of the perineum occurred in a healthy young German woman on whom the operation was done about six weeks after parturition.

Another case of severe operation during lactation consisted in removal of a schirrus breast. Although the healing process progressed favorably, the patient became insane, and remained in a condition simulating the usual puerperal insanity for two months. In this instance the patient was nursing a vigorous infant of about six or eight months, which was taken from the breast for the purpose of having the disease removed.

These two instances seem to indicate, as do others less marked by violence of result, that during active physiological function of the sexual organs no violent surgical treatment not compulsory should be instituted.

The use of intra-uterine douches alluded to by many as a matter of routine, is, think, fraught with danger, and the casual practitioner of gynecology cannot be

too cautious in adopting the practice of throwing into the cavity of the uterus quantities of warm or hot water in treatment of endometrial inflammation. That there are cases and circumstances which require such treatment may be true, but too much care in their administration cannot be used.

There are, in fact, few even of what might be termed minor procedures of medicinal or surgical character addressed to the uterus which do not demand some degree of rest afterwards; and I consider it proper to insist that an office or clinic patient shall remain under supervision for an hour or so after an ordinary intra-uterine application. While the sexual organs are called upon to, and frequently do, safely tolerate astonishingly rough treatment, they very often resent in the most violent manner even slight interference.

Dr. Maughs—I hope nobody will feel alarmed and suppose that we are to desist from local treatment. A great many accidents have occurred, until we have become a little more cautious in our local treatment of the uterus. Intra-uterine injections are always dangerous, and are followed not unfrequently by death. This might be avoided to a great extent by dilating the cavity of the uterus. I should do so cautiously. I never used a uterine injection without a feeling of possible harm.

I think that the patient of Dr. Gregory, referred to by Dr. Engelmann, died from air forced into the uterine vessels and not from shock. There is no necessity of a return current with this injection because no fluid enters the cavity. If life depends upon the washing out of the cavity of the uterus, as in post-partum hemorrhage, wash it out until the return current comes colorless: wash it out with water of 110°; it will arrest the hemorrhage when nothing else will.

With regard to the possibility of danger from sponge tents, I may say that I saw a strong woman die in the hands of a most experienced physician from sponge tents. They had been left a little too long, and had been used without the proper precaution.

Dr. King—I think that harm is done by giving our successes and never giving our failures, and Dr. Engelmann deserves the thanks of this Association for his admirable paper, in which he has the courage to relate his failures. I have for the last ten years sought to do something for the relief of suffering women, and have also experienced some reverses. Such a case is that of a woman of 23, who had been always afflicted with dysmenorrhœa. Each month she suffered as much as she might have done at childbirth. Upon examination I found a marked anteflexion. As the treatment resorted to afforded no relief, I proposed an operation. This was twice postponed for about two weeks, during which time she became very anxious, and finally sent for me to inform me that she was ready. I told her that she was too near the time of the menstrual flow, whereupon she assured me that she would not be sick until the 12th day of April. This was the 26th of March; so that I thought I had sufficient time before the appearance of her menstrual flow. On the next day I performed the antero-posterior section, and dressed the wound according to the directions of Sims and Emmet. She bore the operation well, and lost but little blood. Two or three days later she sent for me and told me that she had made a mistake as to the time at which the menses were expected, saying that they were due on the 4th, instead of the 12th. I of course became alarmed, at once withdrew all the dressing and made warm water injection. I thought it would be a safer course than to keep the plugs in place, as they must necessarily interfere with the functions of the uterus. On the fourth day there was a slight show of the menstrual flow, then a violent chill, fever, and a speedy death.

I think that the precautions which Dr. Engelmann has given us are correct, and should be carefully observed.

With regard to that case of death from intra-uterine injection, I do not think that it was necessarily the substance which was injected that produced death, but rather air, and nothing else. In proof of this theory I will relate a case which seemed to me a very striking one:

I was called to see a lady very suddenly whom I found suffering an intensely severe uterine colic. I saw that I must do something at once, for death seemed imminent. I accordingly took my catheter and passed it into the uterine cavity. Two or three drops of water escaped, and two or three bubbles of air, as well as some air that did not bubble. This seemed to me to prove conclusively that the colic was caused by the air which had been retained in the uterine cavity, the contraction of the muscles about the internal os, and had expanded by reason of the heat of the body. As soon as a means of escape was offered the trouble ceased.

DR. THOMPSON—Not long since a lady from our city (Jefferson) sought the advice of a prominent physician in St. Louis. In the examination he introduced the sound; the effect was so serious that she returned home immediately and there came under my care. It is a frequent occurrence with patients from the country, with present facilities for travel, to seek our brethren in St. Louis. If they do so, the suggestion made by Dr. Engelmann should be observed, and they should not be allowed to return home at once, to board the cars in a few hours after the examination.

DR. DODSON—It appears that in nearly all of the cases reported the serious results have been the consequence of peritonitis. So far I have not heard anything with regard to the treatment of such cases of peritonitis and metrotonitis. My own treatment has been salicylic acid, and always with good results; three to six grains every three to five hours.

DR. ENGELMANN—I am very much gratified with the kind reception which you have accorded my paper, as well the instructive remarks and valuable case histories which it has called forth. These I will briefly review.

Dr. Geiger has very properly insisted that the sound or the applicator should not be resorted to until we become somewhat familiar with the susceptibility of our patient and have at least once carefully examined her; but he errs in the supposition that we can with perfect safety treat these chronic cases who have passed from hand to hand; this is not so, as is instanced by several of my cases.

Alarming symptoms from simple manipulations, in such patients, are indeed the most astonishing, but they do occur, and possibly the existence of a former cellulitis may explain these mishaps. However strange it may seem, we are by no means safe in manipulating these cases; even with them most unexpected and untoward accidents may occur, although it is, of course, the patient who comes for a first time for treatment whose forbearance has not yet been tested, who demands the greatest care at our hands. We should never enter at once upon heroic treatment with any patient.

Drs. Geiger and Thompson have both cited valuable cases which should be taken to heart by city physicians. Patients should never travel directly after undergoing uterine manipulations, although it is so frequently done; hence the sad results which not unfrequently follow, but as nothing is said about them we are none the wiser, and careless men repeat the offence over and over.

In Dr. Thompson's case it was railroad travel after introduction of the sound

which made an invalid of a previously healthy woman, and in Dr. Geiger's case a trifling interference with the vagina in a patient, who had safely undergone a tedious operation before, followed by railroad travel, resulted in death.

I cannot agree with Dr. King in the explanation he gives us of the manner in which vaginal and intra-uterine injections may cause uterine colic. I do not think that it is the expansion of the imprisoned air, and yet, I will candidly state, I am unable to give an explanation satisfactory to myself, unless it be the irritation of a fluid in the uterine cavity which cannot escape.

As I have stated, alarming results may arise from shock, or from the passage of fluid through the Fallopian tubes into the peritoneal cavity, as has been traced, but all other theories I deem most questionable.

In answer to the question of Dr. Dodson, I will say that I have not touched upon the treatment of peritonitis or pelvi-peritonitis, as not within the scope of my paper.

I suppose that the different gentlemen have their various remedies. My treatment is opium and quinine in large doses and hot or cold applications to the abdomen, as suited to the individual and borne by her. I am very fond of commencing with cold applications.

I should hardly be willing to place reliance on salicylic acid in doses of three to six grains every three to five hours; if it is to make an impression in those rapid and trying cases I think twelve or fifteen grains every two or three hours would be called for, but even in such doses I would not deem it a safe experiment. I may be perhaps too unwilling to leave a treatment which I have tried and found satisfactory.

Dr. Jones—I have heard nothing said with regard to the patient's dangers from the remnants of a cellulitis which is supposed to have been cured I have mainly attributed the mishaps with which I have met, consequent upon uterine operations, to the remains of a pelvic cellulitis which had never become entirely well. I had an unfortunate case from the use of the sponge tent in a lady whom I esteemed most highly and whom I treated with the utmost care. She had had a cellulitis some five years before. I had used the steel dilator several times and had made some applications to the cavity, but dreaded every interference on account of the history of cellulitis. Later I introduced one end of a very small sponge tent. It gave no pain. I removed it and introduced a large one which entered easily. I then made an application of tincture of iodine. In less than twenty-four hours she had a chill, metritis, and peritonitis, followed by death. I had been very careful to keep her in bed, not only when the sponge tents were in place, but after I had taken them away. The neck of the uterus was soft. There was no pain, no heat, and while there may have been possibly some inflammation, there was certainly none about the neck. When a medical student, I remember a surgeon to say that he never performed a uterine operation where a previous cellulitis had existed. I do not think that under these circumstances an operation would be justifiable unless it was absolutely necessary.