SOME OF THE COMPLICATIONS FOLLOWING VAGINAL HYSTERO-SALPINGO-OÖPHORECTOMY IN PELVIC SUPPURATION,

With Remarks on the Objections to This Operation.

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Three years have passed by since Dr. X. O. Werder introduced to this Association the subject of vaginal hysterectomy in suppurative pelvic disease. His excellent paper was supplemented in an able and forceful manner by Dr. B. Sherwood-Dunn, who, then just returning from France, gave his experience with this operation obtained in the clinics of Péan, Ségond, Richelot, Pozzi, and others. Our Transactions show that this then comparatively new method of dealing with pelvic suppuration was not favorably accepted. Most of the speakers seemed to be fully satisfied with the suprapubic operation, and expressed the belief that there is a field for the vaginal procedure, but that this field is extremely limited.

A perusal of the literature of the past few years proves that vaginal hysterectomy has made its way here and abroad. Its condemnation upon theoretical grounds has decidedly diminished. Its advantages are too plain to permit of being longer ignored. Men who in the beginning strongly opposed this "mutilating operation," as some are fond of styling it, have changed their opinions. Guided by the experience of others, they have adopted this method and confirmed the assertions of its advocates that it is a conservative operation in the broadest sense of the word, a procedure which, though sacrificing the uterus, conserves the life of the patient even under circumstances where the suprapubic route would mean certain death.

The propriety of removing the uterus in suppurative disease of the appendages has been questioned ever since Péan introduced vaginal hysterectomy. Briefly stated, the chief objections are:

1. The uterus is not a useless organ after the ablation of the appendages, and should not be sacrificed unless seriously diseased.

2. Vaginal hysterectomy is an incomplete procedure, followed by serious complications, and is not curative.

The discussion of the justifiability of removing the not seriously diseased uterus antedates the introduction of vaginal hysterectomy for pelvic suppuration. Commencing in 1876, when Porro introduced the operation bearing his name, the battle *pro* and *con* has been kept before the profession until the present day, has at times been quite animated, and has not always been conducted within the limits of parliamentary courtesy. It is only within the past few years that the Porro, or rather the modified Porro, operation has come more into favor, and it is to be hoped that in the near future its indications may be extended to that unfortunate class of pregnant women whose pelves render delivery through the vagina impossible. This position, at present assumed only by a small number of progressive men, is certainly in accordance with the spirit of science and humanity.

New life was brought into these discussions by Schröder in recommending the supravaginal amputation of the cervix for cancer of the cervix uteri. The argument of Schröder and his followers, that it is unnecessary to sacrifice the entire uterus when the disease is limited to the cervix, was regarded as inconclusive. Strange to say, men objected to this conservative plan of treatment who at the same time condemned the Porro operation as too radical a procedure. Notwithstanding the fact that the statistics of the supravaginal amputation of the cervix as published in 1886 by Hofmeier,[1] then Schröder's first assistant, compare well with those of hysterectomy, the former operation fell into desuetude and today is only a matter of historic interest.

A strong wave of conservative surgery has struck the profession. Beginning to rise a few years ago, it has reached such proportions that even the most ardent advocate of radical measures can neither deny nor ignore its presence. Although it appears that the limits have long since been transgressed, it is impossible at the present day to say how far the principle of conservatism will be carried. In this era of conservative surgery it is refreshing and inspiring to

[1] Zeitschrift für Geburtshülfe und Gynäkologie, vol. xiii. p. 360.

meet with an article whose author, fearless of criticism, steps beyond the trodden path and resorts to and advocates a radical procedure in order to save life. I refer to the article of an illustrious Fellow of this Association, Dr. Rufus B. Hall,[1] published last January. This writer recommends hysterectomy as a preliminary step in all cases of intraligamentous cysts where the tumor is firmly adherent to the pelvic floor and cannot be easily detached. By cutting off the blood-supply before enucleating the tumor the danger of hemorrhage is removed. This method of dealing with a certain class of intraligamentous cysts no doubt is a valuable improvement of our technique, and should as such be appreciated; yet I venture to say that, like vaginal hysterectomy in pus cases, it will meet with the objections of those who insist on the application of the surgical rule not to sacrifice an organ which is not seriously diseased.

The disposition to preserve the uterus during the childbearing age in women with healthy tubes and ovaries, or in unilateral suppurative pelvic disease, can well be understood; but why this organ should not be removed as the initial step of a life-saving operation when the ablation of both appendages becomes a necessity, is beyond comprehension. The assertion that the uterus without the appendages is still an important organ, that its functions have not ceased with the artificial induction of the menopause, must be rejected as untenable in the light of our present knowledge. The arguments that after the extirpation of the uterus the nervous phenomena are more pronounced than when the appendages alone are removed, that the sexual appetite is lost and the sexual relations are disturbed, have strongly influenced many surgeons against vaginal hysterectomy. Careful investigations, however, have shown that these arguments cannot be verified. Mainzer,[2] in his report of two hundred vaginal hysterectomies for chronic inflammation of the adnexa, performed in Landau's clinic, arrives at the conclusion that there is less disturbance of the nervous system after the radical operation than after salpingo-oöphorectomy alone. He further states that the age of the patient bears no relation to the presence or absence of these nervous symptoms. This difference of opinion can probably be explained by the difference in the nervous system

[1] American Gynecological and Obstetrical Journal, 1898.
[2] American Journal of Obstetrics, vol. xxxvii. p. 698.

of the patients. From my own experience I cannot confirm the view that the removal of the uterus increases the nervous disturbances incidental to the menopause, and I am inclined to believe that this view is based upon the complaints of neurotic women.

With reference to the sexual passion, my patients, with but one exception, state that they have as much sexual appetite now as at any time before operation. Two of them, young widows, who married a year after the operation, informed me repeatedly that they are more passionate and enjoy sexual intercourse more than ever.

It is universally admitted that the mortality of vaginal hysterectomy is considerably less than that of the abdominal operation. On this most important point all are agreed, and every surgeon whose first object in operating is the saving of life must feel kindly toward this operation. There is diversity of opinion, however, as to the ultimate results of the vaginal procedure. Notwithstanding the favorable reports coming from all sides, some operators persistently claim that vaginal hysterectomy is followed by serious sequelæ and does not cure the patient.

Before discussing this question I may be permitted to say that I am totally opposed to vaginal hysterectomy in those cases in which there is a possibility of saving one tube and ovary—*i. e.*, in cases of unilateral suppuration, even when due to gonorrhœa. I am not as yet convinced that both appendages must be sacrificed—far less the uterus—when the gonorrhœal infection is limited to one tube and ovary. I know that gonococci have been found in the uterus while the pus in the tubes and ovaries contained no bacteria. Broese[1] quite recently reported such a case. The gonococci in the tubes and in an ovarian abscess had perished, while they were still present and virulent in the uterus and in the urethra. Experience teaches that in a number of these patients, after the removal of one of the adnexa, the gonococci invade the other side, requiring a secondary operation; but many of them remain well, and this is probably due to curettement and other appropriate treatment of the uterus and vagina. The source of the second infection after such treatment is by no means clear. It may be that we did not succeed in destroying the gonococci in the uterine cavity, but the

[1] Zeitschrift für Geburtshülfe und Gynäkologie, vol. xxxviii. p. 589.

possibility remains that such patient has become the victim of a new infection—that she has contracted gonorrhœa the second time. As the risk of a secondary operation, if done per vaginam, is but slight, the conservative plan of treatment—the removal of the diseased tube and ovary by means of an abdominal section—is certainly preferable, especially in young women.

My personal experience with vaginal hysterectomy for pelvic suppuration is limited to forty-two cases operated upon during the years 1895 to September, 1898. This series, though small in number, will be found quite interesting on account of the extent and the gravity of the pathological changes. Of the 42 patients, 18 belonged to that desperate class of cases which, if treated by the abdominal route, are either left unfinished or, according to the statements of prominent operators, have a death-rate of 25 to 30 per cent., not in the hands of beginners, but in those of the most skilful surgeons. The pelvic organs were agglutinated into one mass and could not be distinguished by vaginal or rectal examination. In some instances these masses reached half-way to the umbilicus, while in others the peritoneal cavity was less involved and they extended downward into the vagina, pushing the uterus against the symphysis pubis and compressing the rectum to such an extent that an ordinary rectal tube could not be passed without difficulty. The lesions of the remaining 24 patients were not quite so extensive, yet in every instance both appendages were so far involved that a conservative operation seemed to be out of the question.

The vast majority of the patients belonged to that class of women who have to work to earn a living. With but few exceptions they had passed through many attacks of pelvic peritonitis and were invalids for years. A number of them had come from the medical ward, where they had been sent as typhoid fever and appendicitis cases. About half a dozen were prostitutes. Three stated that they had discharged pus by the rectum several years ago; 4 had previously been treated by vaginal incision and drainage—2 by different surgeons, 2 by myself. Complications occurred in the following three cases:

Case I.—Mrs. H. S., aged twenty-eight years; married; mother of five children. Pelvic peritonitis due to gonorrhœal infection. Pelvis filled with masses. Vaginal hystero-salpingo-oöphorectomy

October 2, 1895; multiple clamp method. The patient made a prompt and uncomplicated recovery, and was permitted to leave the bed on the twelfth day after operation. Two days later she complained of sore throat, and on the morning of the following day of stiffness of the neck and difficulty of deglutition. As the day progressed these symptoms increased in severity, and with the appearance of trismus and opisthotonos it became evident that the patient was suffering from tetanus. The first convulsive attacks occurred late in the afternoon and confirmed the diagnosis. The patient died October 19th, seventeen days after operation. Temperature at death 108.6°.

At the time when this sad accident occurred I was at a loss to explain to my satisfaction the source of the infection. I believed that the bacilli had entered the system through slight abrasions at the vaginal opening, due to pressure of the clamps. As soon as the diagnosis was established these abrasions, which were almost healed and did not look suspicious, were thoroughly disinfected with a concentrated bichloride solution. Immediately after the death of the patient I excised some of this excoriated tissue, and tetanus bacilli were found in great abundance. While the presence of the bacilli in the vagina was thus demonstrated, their origin could not be traced.

It is my rule to remove the gauze, which at the operation is introduced into the abdominal cavity to cover the clamps and to prevent injury to the bowel, on the fourth day. The cavity is then flushed with a sterilized creolin solution and a piece of iodoform gauze reintroduced. This dressing is changed daily until the eighth day, when I leave the gauze out. A vaginal creolin douche, made with filtered water, is then given by the nurse once a day until the patient is discharged.

Although we never succeeded in finding tetanus bacilli in the filtered water, which was examined at various times, I looked upon it, in the absence of other evidence, as the probable carrier of the infection. This view is supported by the investigations of F. B. Hancock and J. C. Hirst,[1] who in 1897 reported five cases of puerperal tetanus. In three of these cases the infection is attributed to intra-uterine douches made with unsterilized water which was shown

[1] University Medical Magazine, vol. ix. p. 750.

to be contaminated by tetanus bacilli. The only case of tetanus following vaginal hysterectomy which I have found in literature occurred in Landau's clinic and is published by Mainzer.[1] The patient died on the ninth day post operationem; the source of the infection could not be ascertained.

CASE II.—Mrs. A. S., aged thirty-eight years; mother of two children; invalid for years. Masses on both sides of the uterus, which was large, retroverted, and adherent to bowel and omentum. Vaginal hystero-salpingo-oöphorectomy October 4, 1897. Patient did well the first two days after operation. There was but little vomiting after the ether. On the third day the pulse-rate increased to 140. She had severe cramps, was nauseated, and again began to vomit. The abdomen was slightly tympanitic; peristalsis increased. Attempts to move the bowels by cathartics and enemata were not successful; only very little gas was expelled by the rectum. The following day she seemed more comfortable; vomiting had ceased, and she was able to retain nourishment. Her general condition, however, did not improve. The abdomen became more distended, and though the pulse-rate went down to 120 it looked like a case of intestinal obstruction. Examination per vaginam was negative; the bowel was not adherent to the vaginal incision. Large doses of Epsom salt and a number of enemata produced one slight and two copious bowel movements in the afternoon of the fifth day. The pulse-rate came down to 104, while the temperature remained around 98°. The patient, though weak, was in good spirits, and celiotomy, for which preparations had been made, was postponed. The following morning she was profoundly collapsed, and died at two o'clock P.M., six days after operation. Autopsy showed that two coils of the ileum, about four inches above the ileo-cecal valve, had become adherent, forming a loop and producing a flexure of the intestine. Neither bowel nor omentum was adherent to the vaginal incision.

This case demonstrates the difficulty of an early definite diagnosis of intestinal obstruction. It is worthy of record that fecal vomiting did not occur in this case. The obstruction was not complete, at least not on the fifth day, when three bowel movements were obtained. This action of the bowels was the deceptive feature

[1] Archiv für Gynäkologie, vol. liv. p. 464.

which led me to delay surgical intervention. As records show, ileus following vaginal hysterectomy is fortunately a rather rare complication.

CASE III.—Mrs. F. R., aged thirty-eight years; married; mother of one child; two abortions. Patient was received from the medical ward October 12, 1897, with a temperature of 104°. It was a desperate case of gonorrheal infection, with the pelvic organs agglutinated into one mass, illustrating the seriousness of delay after palliative treatment has been found inadequate to effect a cure. Vaginal hystero-salpingo-oöphorectomy October 19, 1897. The operation was very difficult. The patient reacted well under the use of stimulants, but remained weak and made a slow recovery the first ten days. From November 1st, the twelfth day after operation, she improved rapidly until November 17th, when, preparing to leave the hospital, she complained of weakness and took to her bed again. On the following day her temperature began to rise and remained high until November 29th, ranging between 101° and 103°. From this day on recovery was uninterrupted.

The cause of the fever could not be determined. At first I thought that too early closure of the vaginal incision had interfered with drainage and that retained septic material was responsible for the elevation of temperature. Repeated vaginal examinations, however, showed the pelvis to be in good condition. The abdomen was soft and not distended, and the bowels responded promptly to cathartics. Examination of the heart, lungs, and kidneys gave negative results. The vaginal creolin douches which had been given this patient were made with distilled water.

Several months later I observed the same symptoms in a patient upon whom I had performed plastic operations. She had been perfectly well until the third week after operation, when her temperature began to rise. This led to further investigations, which showed that the distilled water used in the preparation of the creolin douches contained two varieties of staphylococci—the staphylococcus aureus and albus. The same organisms were found to be present in the air around the tank from which the distilled water was drawn. As Mrs. R. made the impression of a septic patient, I believe her condition was due to staphylococcus infection, and I regard the distilled water as the infecting medium.

I do not want you to think that the distilled water was handled

in a careless manner. When douches are prepared it is drawn from a large tank, which by means of pipes is connected with the distilling apparatus. This tank is sterilized before every operation by boiling in it several gallons of the distilled water, which is then permitted to flow out and is not used. The faucet is cleansed with 10 per cent. carbolized water and sterilized gauze wrapped around it. The fact that the samples which were shown to contain the staphylococci were drawn directly from the tank into sterilized flasks makes it evident that infection took place within the faucet.

I have reported this case at length to direct your attention to a source of infection which, springing from the water used in the post-operative treatment, is rather occult and easily overlooked.

With the exception of these three cases I have not met with any complications. The absence of the serious post-operative sequelæ which follow the abdominal procedure in similar conditions is the most striking feature in the subsequent history of the cases and a great comfort to both the patient and the operator. I have followed up my patients and have thus been able to examine most of them. In every instance the pelvis was found to be in a satisfactory condition. No complaints worthy of note were made. These women are practically well, able to work and to enjoy life.

In conclusion, I desire to express my thanks to Dr. R. G. Burns, bacteriologist to the Bureau of Health of Allegheny, and Dr. J. Wolf, bacteriologist to the Allegheny General Hospital, for the numerous bacteriological examinations made in the reported cases.

DISCUSSION.

Dr. Joseph Price, of Philadelphia.—Mr. President: This is a subject that, from your experiences, many of you should say something about. Too many members are thinking about their suprapubic results and work, as most of you are grounded in that route. I value the paper. It is a most interesting presentation of the subject, and it opens up rather a new discussion. While some of you may think it is new, it is not, for we have been discussing this subject for many years; but our discussions have been so directed from above the pubic arch that we have not considered it as fully as we ought to have done. An allusion was made to the absence of the uterus, and from one's personal experience this subject is worthy of careful consideration. For instance, an allu-

sion was made to the sexual condition of patients following a variety of operative procedures. To begin with a reference to Porro operations, I will say that in a series of seven of these operations most of the women were sterile for many years, because the tumor or pathological conditions existed unfavorable to conception. In two or three instances the women had been married ten or eleven years before conception occurred. I did not look into their sexual history, although it would have been a simple thing. However, there have been no complaints since the Porro operation. These women live with their husbands; are happy, thrifty, and rosy, and where I have had an opportunity of making inquiry into their sexual lives they have always said that the operation had really improved their sexual appetites. In supravaginal hysterectomy by the Koeberle method we rarely have complaints. In supravaginal extraperitoneal hysterectomies it is the rarest thing for a woman or her husband to complain after the operation. You may reply by saying that she has a pelvis to the coccyx and pubic arch filled with fibroids, and the tumors bleed irregularly. That is true in many of these cases. It is difficult to pass a catheter between the pubic arch and the tunors, and sexuality with those patients is out of the question.

Women with distended tubes and ovaries complain; their husbands also complain, and they complain more after extirpation following suppurative forms of disease than they do in malignant cases. But the question of age comes in here. There is usually a difference of ten or twenty years in the age of the patients. The tubal suppuration is in a young woman; the malignancy occurs in a woman of advanced years. Schröder's point was well taken. It has been my experience. I have done a large number of extirpations for malignant disease, and I am not prepared to say with that large experience that there is much in extirpations for malignancy. Sims went to Boston and delivered a lecture for Oliver Wendell Holmes before his class, and took for his text "The Curette" and the repeated use of the curette. Other very good authorities have read papers on the same subject, and in my experience I want to say to you that I have prolonged lives a few months longer with curette and cautery than by extirpation. Patients have lived fourteen, sixteen, or twenty months, or even three years after the use of the curette and cautery, and after a clean extirpation they have only lived sixteen, fourteen, and in some cases not more than twelve months.

There has been an allusion to Dr. Hall's method with which I do not agree. The enucleation of all fixed or adherent cysts, in my experience, has been very much more favorable than by the multiple

operation. I would under no circumstances recommend extirpation of the uterus and tying or clamping of vessels, to be followed by the enucleation of the cyst. The enucleation of such adherent growths is a matter of apprenticeship, of training in pelvic cleavage.

I will again refer to sexual relations following Porro operations, and also to the methods of extirpation. After supravaginal amputations I believe the complaints are less from a sexual stand-point than from vaginal extirpations in patients of the same age. We must consider age in discussing the nervous phenomena incident to a normal or precipitate menopause. Take the so-called neurasthenic patient who has spent six months or six years in rest cures and sanitariums; in the south of France one winter and in Los Angeles another, and who has acquired the opium habit, and you have a woman in whom, after extirpation of the fixed and occluded appendages, there is an old occlusion with retention of pus or water. She probably had a miscarriage ten or twelve years previously; you have a patient with well-marked nervous phenomena and one not favorable for a precipitated menopause. The effect of an operation near the normal menopause is thrice less marked than in that group of cases. This is one of the reasons why neurologists complain so bitterly of some of our results. The neurologist has had the patient on his hands perhaps for fifteen years. If, then, she is operated upon, she makes a tedious recovery in his hands, and he does not recognize that his delay and opium are wholly responsible for the tedious recovery. As I have remarked, the woman has spent perhaps fifteen years in sanitariums and rest cures, having lost thirty or forty pounds, and has shins that she would not under any circumstances exhibit on a bicycle. And then she complains of creepy, hot or cold sensations. The last patient I examined was one of this kind. She had spent seven years in rest cures. This patient needed an operation, as several of the organs were involved, among them the tubes and ovaries. It would not be an easy thing to operate on such a patient.

Reference was made to gonorrhea and post-operative infections. Take that group of cases, and it opens up an interesting field for discussion. Really, among poverty-stricken patients that appear at our public hospitals and dispensaries for treatment there is nothing so common as the husband contracting gonorrhea or syphilis while his wife is being confined in the hospital. It is a common thing. I look upon it as a miserable misfortune of her absence, that she is to be infected by gonorrhea or syphilis after leaving the hospital and having undergone a serious and complicated operation for which her husband was primarily responsible. But to talk about the gonococcus,

we must begin with the vulva, the vulvo-vaginal glands—get rid of them by removing puriform tubes and ovaries to the cornu of the uterus. There may be few gonococci in the uterus, more in the vagina, and a few in the vulvo-vaginal glands.

Reference was also made to unfinished or incomplete work with a mortality of 25 per cent. This mortality has been the bane of gynecology. A few operators in this country are now re-operating on all the abandoned and unfinished work, some of them performing one or more a week. It would take forty-five good operators a whole year to clean up the forty-five States—that is, the unfinished, incomplete, and imperfect work that has been done by the vaginal method. The very men who do this incomplete work by the vaginal method are the ones that argue against and have practically abandoned the suprapubic route. Some of them are now becoming convinced that the abdominal route is the better for dealing with many of these cases. Notwithstanding some surgeons have had a series of a hundred and fifty operations, attended with pleasing or satisfactory results, by operating suprapubically, some of them have thrown up their hands and said, " no more laparatomies."

Dr. Blume, in his paper, referred to the method of vaginal incision and drainage, reporting four cases in forty-two in which it was necessary to repeat the vaginal punctures. Most of you will recall Dr. Kelly's series of thirty-two or thirty-seven cases—I do not remember which—where three of the patients returned for a second or third puncture, and two or more of the thirty-seven returned for abdominal section and the removal of the pathological conditions. It is interesting to note that four cases out of thirty-two required subsequent supravaginal hysterectomy, or extirpation of everything, to cure them.

A word or two with reference to intestinal obstruction. The vaginal route favors bowel obstruction. In this series of forty-two cases we have intestinal obstruction on the fourth day. In one case the obstruction was relieved. In the case that died the adhesions antedated the operation, and was part of the pathology that should have been relieved. The operation had nothing to with it except that it was incomplete. Coe, in a series of ten vaginal hysterectomies performed years ago, reports two cases with death from intestinal obstruction. The pathological conditions in this group of cases are reported as angry, vicious, the structures being involved up to the iliopectineal line or to the umbilicus, and underlying the adherent omentum and bladder, the sigmoid and cecum fused behind the uterus and adherent to it, and we have ten or twenty inches of ileum tied up in figures-of-eight and S's and fixed—pathological conditions that influ-

ence me wholly in the choice of operation. Removal of the specimen is a small part of the operation. In a series of one hundred cases of pelvic suppurative diseases we remove the appendix in fully 10 per cent. What takes place by the vaginal route? Extirpate the uterus with your figures-of-eight and kinks in the bowel, with a descent of the viscera; you intensify your intestinal obstruction, and the mortality from bowel obstruction is really larger than that recorded. The death-rate is much higher, and I allude now to recent results.

Dr. Sutton went to Dr. Mann, in Buffalo, and did a vaginal section, after saying no more laparatomies, and the patient died. Jacobs goes to Mann, by invitation, does a vaginal section, and the patient dies. Ségond goes to Buffalo for Dr. Mann, by invitation, performs a vaginal hysterectomy, and the patient dies. Here we have three patients, who, on the second or third day after operation, had distention and vomiting, and died on the third day. No post-mortem examinations were made. I may be in error; I do not say that these three deaths were due to intestinal obstruction, but I believe if a post-mortem examination had been made a kink in the bowel would have been found which should have been freed and repaired primarily.

I thank you for giving me the floor so long.

Dr. Edwin Ricketts, of Cincinnati.—I do not know of any diagnosis that covers so much as pus in the pelvis. It reminds me a good deal of some of our Western physicians who have fevers to contend with, and when they do not know just exactly what to call it they simply diagnosticate it as malaria. Pus in the pelvis may mean an ovarian abscess; it may mean a pus-tube; it may mean pus in one or both broad ligaments; it may mean pus in the wall of the uterus that is extraperitoneal; and it all comes under the diagnosis of pus in the pelvis. It is the differentiation that I want to dwell upon more especially, and I wish to say that in a case that came recently under my observation five weeks after confinement, it being the seventh case of infection following delivery by a midwife, there was distention of the bowels. Peritonitis was present, and upon vaginal examination on the right side of the uterus was a mass to be felt. It was difficult to make the diagnosis in this case or to differentiate as to whether the pus was extraperitoneal, whether in the wall of the uterus, whether it was a pus-tube, or whether it was an abscess that was beginning to make its appearance above the iliac crest. Being satisfied that the abdomen had to be opened, the combined method was used. The abdomen being opened and the uterus being found patulous, the right index finger was thrust into that dilatation, and two ounces of pus were turned out of the uterus and nearly a pint of fluid was found

in the abdominal cavity. The uterus was pulled up, and the peritoneal covering was not broken through near the abdominal cavity by thrusting the index finger through the uterus in that way. The tubes and ovaries were found all right. The uterus was packed and a satisfactory recovery was made in this case. The abdominal cavity was drained. In this case peritonitis existed; in spite of our best efforts we had a stitch-hole abscess in every puncture of the needle. One of the points I wish to emphasize is the infective character of the peritonitis in this case.

Mr. President and gentlemen, I am not here to advocate the vaginal route in all cases of pus in the pelvis, it makes no difference where the pus may be. I have a case under observation now, the sixth week following delivery, the wife of a physician, in which there is infection. The temperature rose to 105.5°, then going down to 99° and 99.5°. Under two examinations with chloroform I have been unable to locate pus in either instance. I have tried to save the stomach, and she is making good progress. In the case referred to, in which the pus was in the wall of the uterus, I am quite sure some of the advocates of vaginal hysterectomy would have done this operation, and would have shown us the pus and claimed it was a victory for the vaginal route. But I wish to say that that patient has her uterus, ovaries, and tubes intact, and I expect in time to deliver her of a healthy child.

Mutilation of these women is a question for serious consideration. The argument made use of by the last speaker (Dr. Price)—that in opening the abdomen in 6 per cent. we remove the appendix—I agree with. Those who advocate the vaginal route altogether do not have the advantages in dealing with this class of cases that surgeons do who operate suprapubically.

Dr. Rufus B. Hall, of Cincinnati.—I want to commend the essayist on his very concise and interesting paper. While we may not all agree as to the manner in which we attack pus in the pelvis, nevertheless I believe this contribution is of great value. I am not willing as yet to say that I will attack all of these cases through the vagina, where we must sacrifice both sides; but I am willing to say that there are cases coming under my observation where I believe vaginal section with drainage is a life-saving operation, and personally I am inclined to limit the operation to those few cases. For instance, Dr. Blume cited one or two cases that were transferred to the medical ward with a temperature of 105°; they were treated for a week for typhoid fever. Before entering the hospital the patients were already septic and undoubtedly had large accumulations of pus. These patients might have recovered from vaginal section and drainage. Perhaps a

hysterectomy might not have been required, but simply letting the pus out, allowing the women to recover from their sepsis, and then doing a radical operation when they were not septic, if incision and drainage did not effect a cure. I am inclined to do hysterectomy in pus cases. If I attack them through the vagina I do this temporary operation for the reasons advocated by the previous speakers. There is such a large number of cases with adhesions to the viscera that successful and satisfactory work cannot be accomplished by the vaginal route. I cannot remove an appendix for appendicitis or a suppurating ovary and do as nice an operation through the vagina as I can if I open the abdomen. I cannot liberate the coils of ileum, cut off omentum with suppurating cavities, and do as complete an operation vaginally as I can by the abdominal route. I quite agree with the author in one assertion. Taking these cases as they come, one with another, after hysterectomy patients suffer less from reflexes. This is especially true in a young woman. If she is under thirty-five and the uterus is removed, if you do an abdominal operation and remove the uterus, the patient suffers less from reflex troubles than she does if you leave the uterus. That is my personal experience. In answer to the question of Dr. Price, he did not understand the subject in hand when he referred to removal of adherent cysts in doing hysterectomy. This subject will come before the Association later, for I propose to show some specimens and photographs and introduce the subject for discussion. I do not propose to do hysterectomy for the removal of adherent cysts, but for an entirely different purpose.

Dr. Charles Greene Cumston, of Boston.—Suppurative conditions within the pelvis, considered generally, I think demand different treatment according to their situation, the number of foci present, the size and nature of these foci; and in making our diagnosis we must consider all of these conditions when we take into account the choice of operation, whether it be the vaginal or the abdominal method.

I do not wish to consider the indications for vaginal hysterectomy, but I agree with Dr. Blume, that if we are going to resort to this procedure it should be complete. If the tubes are suppurating the uterus is undoubtedly infected—at least microscopical examinations of all such cases have shown the uterus in a bad condition, and removal was justifiable. I think if we remove the ovaries and tubes and leave the infected uterus *in situ*, the patient will have trouble with the uterus later on, and if the husband is a dissipated man she can have a gonorrhea which may result in further trouble for her. In most cases of pus in the pelvis, speaking in a broad way, I think posterior colpotomy or incision of Douglas's pouch is a very trifling operation, and it is

also a conservative procedure. It can be performed in chronic purulent lesions of the female pelvic organs, and also in acute suppurative conditions, with fever, where it would be dangerous to do either abdominal or vaginal hysterectomy. Care must be taken in all of these cases, when working in the vagina, to render the canal aseptic, because I believe a great deal of trouble subsequently arises from an improperly cleansed vagina, and I would insist that it is necessary to prepare the vagina very carefully.

I have performed posterior vaginal section, and I wish to say, never puncture with a trocar. The trocar is a dangerous instrument. I never use it. Always make a clean incision with the knife and open the posterior cul-de-sac with the fingers and empty the pus. I have done this successfully in gonorrheal pelvic peritonitis, and in one case of abscess of the broad ligament, both being gonorrheal patients. I do not know how many times I have done it—I would not like to say, but I am sure I have done it successfully in several instances. These patients have done well, and have never required further operative interference unless they passed into other men's hands, and I know of no recurrence. If the purulent collection is made up of multiple pockets, vaginal incision would be inefficient. It is also inefficient when the walls of the abscess-cavity are thick and rigid, because they do not collapse, and consequently the patient will remain in a chronic septic condition. In such cases vaginal incision is poor surgery. Vaginal incision, however, should be preferred to vaginal or abdominal hysterectomy when the patient is young. I have seen patients, who were in a bad condition before operation, recover entirely and become mothers after vaginal incision; and there is one thing certainly in favor of vaginal incision, as pointed out by Dr. Blume, namely, that it is not a serious operative procedure; if it does not bring about the desired result we can later resort to either abdominal or vaginal hysterectomy. It is better, therefore, to give a patient a chance to retain not only her uterus, but the tubes and ovaries. From what I know of this operation fistules are not very frequent, and if a fistula does result it is because the operation was badly chosen in the given case.

Dr. James F. W. Ross, of Toronto, Canada.—Last year, after the meeting of this Association, we had a meeting of the British Medical Association in Montreal, and I was asked to take part in the discussion of the vaginal *versus* the abdominal route. For some time it puzzled me to find out why it was that the vaginal route suddenly took such a hold upon the profession and became so popular. It was a mystery to me. I gained at that time—by forcing the discussion,

which was very animated—the information that there are certain hospitals to which are attached gynecologists or gynecic surgeons, if I may so call them. A peculiar rule is in force, that when the abdomen is to be opened the general surgeon of the hospital has to do it; but that when it is necessary to operate by the vagina in these institutions the gynecologist is allowed to proceed. This rule was a prime factor in bringing the vaginal route into favor. The men doing this work in this country belonged to such hospitals, and there were hospitals in which they were not allowed to open the abdomen. Then, suddenly, such men as Drs. Price, Davis, McMurtry, Carstens, and other men who had been doing abdominal operations for years, were told that their work was useless; that they had been working in the dark; the women were not cured. This was nonsense. Undoubtedly many of us have operated for pus tubes, and the women are enjoying perfect health to-day, without any fistulous openings, without any septic uteri being left behind.

There is one feature in connection with these cases and with the subject that I wish to call attention to. In speaking to Dr. Mann the other day we talked over the use of the silk ligature in operations from above. It is sometimes the cause of trouble. Dr. Mann said to me that one woman with a buried infected ligature in her abdomen was enough to frighten a man from using silk the rest of his life. He instanced the case of a lady who had been operated on three or four times for the purpose of removing infected ligatures. These silk ligatures will become embedded, and adhesions will become so dense that it is almost impossible to remove them. I believe the day of catgut is coming fast; I believe before long we will cease using silk in our abdominal operations, and will be using catgut, and the danger from the formation of sinuses from silk ligatures will have then ceased.

At this meeting of the British Medical Association the question of vaginal hysterectomy for cancer was also discussed, and I may say that my experience entirely agrees with that of our distinguished Fellow (Dr. Price)—that is, that vaginal hysterectomy for cancer, no matter how early it is done, is not as satisfactory an operation as we can desire, and while cases are reported in our medical journals that have lived for four or five years, that this is not the general rule. I have done vaginal hysterectomy for malignant disease of the fundus, where there was no evidence of infection outside, in two cases. And the patients have returned with the disease at the end of twelve months.

The curette and cautery, or high amputation of the cervix after the method of Byrne, has been as satisfactory as vaginal hysterectomy in

my hands, if not more so. The patients live just as long after this less dangerous operation as they do after vaginal hysterectomy.

Reference has been made to hysterectomy by Dr. Hall's method for intraligamentous cyst. I do not think such an operation should be done for intraligamentous cyst. A great deal depends upon the technique employed. I will state that I undertook to remove two intraligamentous cysts within the last ten days. These cysts, first of all, should be partly enucleated close to the pearly lining before they are punctured; after that the remaining portion of the enucleation can be carried out much better with collapse of the cyst wall. If the pearly lining of the tumor is kept close under the eye in peeling back the adhesions, there will be only two or three veins that will give rise to any trouble in the way of hemorrhage. Undoubtedly many of you who have had these cases to contend with have found the same thing. While I am satisfied that vaginal hysterectomy is right enough for cancer, it is not the best operation for dealing with fibroid tumors. There is a danger that has already revealed itself in connection with the operation of vaginal hysterectomy for the removal of fibroid tumors, and that danger is the too frequent removal of small growths that do not demand operative interference and that should be left alone, as patients can frequently bear children even with these tumors present. I have recently had a case demonstrating this fact. A lady had a small fibroid tumor, was married for seventeen years without becoming pregnant, and two months ago bore a living child. I saw her within the first month of pregnancy and watched her until the child was born. I was prepared to do a Cesarean section if the presence of the tumor proved an obstacle to labor. She was delivered in the ordinary way and had not a difficult labor. She would have had no child had she fallen into the hands of one of those who are rather prone to remove small fibroid tumors by vaginal hysterectomy.

Dr. L. H. Dunning, of Indianapolis, Ind.—I have greatly enjoyed this discussion. I believe it will be the means of bringing us closer together in our belief and practice. I shall speak of only one or two points. First, in regard to the character of the suppurative products we meet with which will call for different kinds of procedure. In the eighteen cases described by the essayist, in which he found pus accumulations exceedingly large, extending as high as the umbilicus, fixed, and extending down into the vagina, it has been my practice, and I see no reason to change it, for ten years to do vaginal section in such cases. In such instances, where a vaginal hysterectomy is done, it is an impossibility in the majority of cases to remove the pus sacs. It cannot be done. I have tried it many times myself, and I have been

compelled to abandon it. Unless a man is more dextrous than myself, he cannot accomplish the removal of these pus sacs, when fixed, after the method that has been described. Furthermore, operations upon cases of this sort from above are attended with a mortality of from 18 to 25 per cent. I suppose Dr. Price has had a much lower mortality than that, but I have not in that class of pus accumulations in the pelvis where they are large, fixed, and extend as high as the umbilicus. I have operated on fully fifty cases of this sort by vaginal incision, and of that number four only have been returned for subsequent operation. All but one of them have made primary recoveries. I would be glad to resort to any operative procedure which will yield better results, but I have not been able to find any other means that would accomplish as much. In two instances abdominal section was done, and chronic abscess removed by enucleation from above. In two cases subsequent punctures were required, but the patients were cured under careful treatment.

One of the great objections to vaginal hysterectomy in pus cases is that the patient infects others. In my hospital I am compelled to keep two rooms, set aside, for the purpose of subsequently treating vaginal hysterectomy cases. We cannot take them to the general ward, on a clean floor, because just as sure as we do we will have other cases infected. Stitch-hole abscesses will appear, and it is a matter of impossibility to avoid them. In my connection with three hospitals we are compelled to isolate these cases. This is one of the serious drawbacks to the method, and it will always remain so.

Another objection is the subsequent development of abscesses from two to four months after operation. You send your patients home, and a certain number of them come back to you with abscesses in two or three, or, perhaps, four months afterward.

One other point upon this subject, and I am done. I will not do a vaginal hysterectomy or a total supravaginal hysterectomy upon any woman under thirty years of age, unless I am compelled to do so to save life or to rescue her from hopeless invalidism. I could, if necessary, pick out from a dozen cases one of vaginal hysterectomy without any one saying a word to me, by the dejected countenance and by the faded appearance of the patient.

One other word, that is, regarding the enucleation of intraligamentous cysts. I believe we all have cases in which, no matter how carefully we follow the pearly line that has been alluded to, we will have the cyst wall practically under our hands as we attempt to enucleate it. In other cases an immense or profuse hemorrhage will occur, and I am constrained to believe that I have had two cases in the last year

in which a fatal termination would have resulted had I extirpated the uterus in both instances by the Baer method; I thus opened the broad ligament, and to my great delight I found my hand just beneath the cyst wall, and by carefully turning the hand and moving the fingers gently enucleated the sac. There was very little hemorrhage. I would be chary in condemning this method in extreme cases where by pursuing old methods so many patients die upon the table.

Dr B. Sherwood-Dunn, of Boston.—The remarks made by our colleague from Indianapolis in reference to the septic condition in which a patient is left following vaginal hysterectomy is, to my mind, one of the gravest objections to this operation. If the mortality rates of surgery are more largely dependent upon aseptic conditions than upon any other one factor, then it is necessary for us to exclude from our hospitals septic cases that endanger the inmates with septic infection. I think this Association should feel indebted to Dr. Blume for his excellent paper. It is only an additional evidence that is coming to us from all parts of this country, that vaginal hysterectomy in the hands of the many excellent operators we have at home is being more rapidly thrashed into its proper and legitimate place as a surgical procedure than perhaps in any other country.

Dr. Blume referred to my address at our Chicago meeting, and, as most of the members present know, I at that time was a pronounced advocate of vaginal hysterectomy. At that time I had just returned from a field where it had arrived at its most excellent degree of perfection, and was practised to a large extent by the masters of that particular operation, and which in their hands had shown a favorable rate of mortality that has never been equalled by any other kind of operation. But in the hands of our surgeons at home the consensus of opinion is—and in this respect I add my own testimony—that the perfection of technique of hysterectomy by the vaginal route exceeds in difficulty that by the abdomen to a great degree. The complications that follow this operation exceed in great degree those by the abdominal route. The danger to the ureters, to the bowel, the danger of post-operative hemorrhage, are all very much greater by the vagina than they are by the abdominal route. Since I have had the advantage of three years' experience at home, and have seen the wonderful results of abdominal surgery in my native land, I have practically abandoned vaginal hysterectomy, and have relegated it to a few selected cases, where I am fearful of the death of my patient by the suprapubic operation, and I look upon it as only a tentative procedure. It is rarely complete; it is a difficult operation to make complete, and in

many cases it will be followed by a second operation through the abdominal wall.

In respect to the treatment of pus in the pelvis by the abdominal route, this Association has to consider that in the hands of such Fellows as our distinguished Dr. Price, who, I think, is acknowledged to be second to no abdominal operator in the United States, and in the hands of Dr. Ross, who holds the same position in our northern neighborhood, they can undertake the successful treatment of important and dangerous cases that the majority of us, who have not had extended opportunities or the experience they possess, cannot approach with the same fortitude. Therefore, I do not think it is just, neither do I think it is practicable, to condemn palliative and tentative operations in the hands of those who are less experienced, and who by vaginal incision and evacuation of pus, and other operations of a kindred character, save the lives of their patients who probably would die were such operations undertaken through the abdominal wall.

There is one thing I do not think has ever been discovered or acknowledged by operators in general in America with respect to vaginal hysterectomy, that is, that the after-treatment of the patients is fully as important in respect to their ultimate recovery as is the technique of the operation itself. In the papers that have come under my notice on this subject, and in the discussions I have heard in this and kindred societies, I have observed a great diversity as regards the after-treatment of patients, no two men practising the same line of after-treatment. Any one of us who will visit the clinics of the great operators who are the exponents of this operation abroad—Jacobs, Richelot, Doyen, Lucas Championnière, and others—will see nothing but the operation. We do not walk the wards and see the after-treatment of the cases. In this respect we are weak. My exceptional opportunities in being attached to the service there for many years brought this to my attention; but I cannot take up the time of the Association in going into its details.

In respect to the three deaths that took place in Dr. Mann's service in Buffalo, in which celebrated operators, like Sutton, Jacobs, and Ségond, took part, there is food for reflection. I can only account for it in that possibly they were given patients in a dying condition to operate upon; it is a misfortune, for the bad statistics that followed their operations when they visited our country are enormous; and they were in a large measure, as I have since learned, due to the fact that they were given cases which none of us would operate on, or would, at least, hesitate to do so. These patients were in a practically dying condition. On the other hand, for perfect technique and for the

facility of carrying out this operation, an operator is largely wedded to his own armamentarium. He is practically lost if he does not get his own instruments and his own assistants. He is taken out of an environment in which he has operated upon hundreds of cases. The success of this operation in the hands of those gentlemen depends largely upon the environment. It is not so in suprapubic work.

You will all remember that Professor Ségond came to this country to show how easy it was to extirpate four, eight, ten, and twelve pounds of fibromyomata through the vaginal route. In the mean time he saw a great deal of abdominal work by our best operators, and within thirty days after his return wrote a paper for the celebrated Surgical Society of Paris, which was published in the *Revue de Gynécologie*, and translated into many languages, the title of which was "Abdominal Hysterectomy for Fibroids, and the Superiority of the American Method over all Others."

Jacobs came to this country on a missionary tour to convert American surgeons to vaginal hysterectomy. He returned to Brussels a convert to the suprapubic operation, and recently told Dr. Lapthorn Smith in his clinic that he considered it the operation of choice for total extirpation of the uterus and its appendages.

As to cancer, I do not believe the majority of American operators will support me—especially Drs. Kelly, Wylie, and others, who have done large series of vaginal hysterectomies—in saying that abdominal hysterectomy is the operation of choice for cancer. Through the abdominal wall, with sounds in the ureters, you can dissect out through the broad ligaments, not injuring either of those organs. You can bring the intrapelvic glands into view and extirpate them if any of them are diseased. It is possible to do an operation for cancer by the abdominal route that it is impossible to do by the vagina.

As regards the treatment of pus in the pelvis by vaginal hysterectomy, I believe it is the method of choice, and I should not be at all surprised if ultimately this operation would be relegated to that domain in surgery.

With respect to leaving the uterus *in situ* when the appendages are removed, and its usefulness there, we have, first of all, the old argument that it is the keystone of the pelvic floor, which is a good one. It takes but a short experience in the treatment of diseases of women to discover that the seat of sexual pleasure is often located in the female cervix. The first law of nature is self-preservation; the second is the propagation of our species, and the Divine Creator has implanted in the human heart and mind a desire for sexual intercourse which never can be eliminated, and where two people are yoked together for

life and this relation is obnoxious to either one or the other, unhappiness in that family is bound to creep in sooner or later.

I think there is one thing, in speaking of leaving the uterus and robbing it of its appendages, that has not been mentioned in this discussion, that is, we all know that just as soon as this organ is robbed of the ovaries and tubes it immediately begins to atrophy, and after a shorter or longer period of time it becomes a small and inoffensive organ, and I do not agree with our foreign colleagues, principally Professor Richelot, of Paris, that when the adnexa are removed the uterus remains a dead, inoperative, and valueless organ in the female pelvis. There is much said by certain operators in respect to making amputation and leaving the cervix on the floor of the pelvis. If you leave the cervix, why not leave the whole organ? If you amputate at the cervix you are more liable to have infection and after trouble with the case; if you leave the whole organ you do not face the same complication. In this respect I have changed my opinion since I have resorted to it. I was of the opinion at one time that the uterus was a useless organ and ought to be removed. I think so no longer, and if the uterus must be sacrificed, then I favor leaving the cervix.

I have been exceedingly pleased in listening to the paper and to the discussion which it has elicited.

Dr. W. E. B. Davis, of Birmingham, Ala:—The position of the French surgeons has been clearly defined by Dr. Ross. They were compelled to do their work through the vagina, and in order to reach the pelvis the uterus was removed. They asserted that its removal was necessary for the good of the patient, when in fact it was only done to allow them to better operate by that route. To do conservative surgery it is necessary to operate by the abdominal route, and it is very conclusively shown that radical surgery must be done in the same way. However, vaginal incision and drainage has a large field, as has been pointed out. There is a great deal of difference in operating upon old gonorrheal cases and upon fresh puerperal ones. Unquestionably all cases following the puerperal state, where the trouble is local, and the surgeon can place his finger upon a mass on the side or behind the uterus, can be dealt with better by the vaginal route than by the suprapubic. I do not care how skilful the surgeon may be, I believe he makes a mistake when he opens the abdomen to deal with such cases. The operation of vaginal incision and drainage is so simple and devoid of danger that we should give them the benefit of this procedure. We must remember that some of these cases will come back for subsequent operation; but we should be willing to give young women several operations, if necessary, to save important organs. The possi-

bility of preserving these organs means more to them than the danger of having to undergo a second or third operation.

A young woman from Mississippi came to me about eighteen months ago, and I found a mass, quite small, behind the uterus. The patient was septic. This was five weeks after she had been delivered at term. In curetting the uterus I cut through it, making an opening as large as my index finger. I did not remove the uterus, but made an incision behind it, drained the abscess with gauze, and according to last account the woman is pregnant six months and doing well.

Dr. Charles A. L. Reed, of Cincinnati, O.—I have given some thought to this question of the alternate route in operations for suppurative conditions within the pelvis, and I have had some experience that has been not without its value, at least to myself. When these innovations come from the hands of respectable and serious operators with results that seem to justify their serious consideration, I feel it is our duty to put them to the test of practical experience, and that has been my method with regard to the vaginal operation for pus in the pelvis. I have endeavored to deal with these cases by that route as carefully and as conscientiously as possible, and I may say that I have since been doing this work by the abdominal method. My remarks at once imply that I have abandoned the vaginal route and have returned to the principle of operating by abdominal incision. I have done so for the reasons that have been recounted in this discussion with so much clearness and precision. Operations by the vagina are generally incomplete. These patients frequently die from the aggravation of a pre-existing partial volvulus induced by old adhesions that are not broken up. There are complications that exist in these cases that cannot be brought under control, for the reasons given in this discussion, and it is unnecessary to reiterate them. But I have found a class of cases in which I believe hysterectomy is a very important concomitant in the course of treatment. I do not attach very much importance to the question of the physical value of the uterus as the keystone of an imaginary arch. The tissues are too flexible, there is too much elasticity for us to compare the pelvic diaphragm with an arch that sustains a bridge, and I have had no difficulty in recoveries arising from this so-called keystone in the arch. But there are cases in which I remove the uterus, but I do not do so per vaginam. There are cases of manifestly infected uteri, those cases in which the uterus is soft and flabby, with recent acute infection, parametric, if you please, more or less engorgement, and in those I put on a vulsellum forceps, lift up the uterus, put in a couple of ligatures on either side, take out the uterus, stitch the peritoneum over, and thus get rid of a

dangerous element. In my cases I do abdominal hysterectomy. It is not a difficult procedure, and we eliminate factors which we have found to be dangerous. But I do not proceed in these cases until by inspection and consideration of all the circumstances of the case I am convinced that the state of affairs does exist with regard to the case. I may say here that we had the pleasure of seeing a case of this kind yesterday, in which, after extirpation of the appendages, the soft and flabby exuding uterus was found to be such a menace to the patient subsequently, that our distinguished colleague, Dr. Werder, proceeded to perform hysterectomy just as I have indicated, a line of practice which I have adopted for some time; but that it should be adopted in all cases and be made a hard-and-fast rule with reference to treating infected appendages, I do not believe.

This discussion has been exceedingly fruitful, and I am very glad to add my testimony to the value of the contribution of Dr. Blume. I am sure it will be frequently referred to in our volume of TRANSACTIONS.

DR. A. B. MILLER, of Syracuse, N. Y.—Several years ago I believe our President treated of the subject of puncturing uterine abscesses. This procedure was subsequently condemned, and at the present time, instead of resorting to puncture, the posterior cul-de-sac is incised, in this way evacuating the contents of the abscess. Certain stress was laid upon that as a diagnostic measure. We find in many instances, where the organs are in place, the pelvis is filled with an inflammatory mass, and it is difficult for us to determine by digital examination the amount of pus present in the pelvis, whether there be a slight amount in the upper portion or a considerable amount. The condition is described in Thomas's work as pelvic cellulitis, where the whole pelvis is filled with an inflammatory mass. The point I want to make is this: In a case of that character, it is impossible for us by any means of diagnosis, by palpation or conjoined manipulation, to locate the position of the uterus. As a result, if we make an incision, opening into the posterior cul-de-sac, going into the pelvis, it is possible that instead of the uterus being above the symphysis pubis, the uterus is represented by a thing of this kind [illustrating]. In getting into the posterior cul-de-sac the point of the scissors is thrust into the uterine pouch, and in separating the blades of the scissors excessive hemorrhage takes place. If hemorrhage does not take place at once, it will shortly after, and death may result. I have seen no mention of this in the literature or in any discussion I have listened to. It seems to me that one of the points which should be impressed upon the profession as a diagnostic measure is, that it would be well for us in all instances to

introduce a sound into the uterus to determine its position before resorting to puncture. If a patient is thoroughly reduced in consequence of sepsis or the presence of a large amount of pus, we can resort to vaginal puncture and afterward do an abdominal section and remove the pathological conditions entirely.

Dr. J. Henry Carstens, of Detroit.—I want to ask Dr. Price a question. Did he ever operate for suppurating tubes by the vagina and remove the uterus?

Dr. Price.—Yes, repeatedly. I have done vaginal hysterectomies in large series for many pathological conditions, and I am speaking from practical experience and not from any fancied preference for the suprapubic route. This brings me back to an important point. The men in this country and abroad who for years condemned drainage of any character, stating positively that the use of drainage was an admission of bad surgery, etc., now extirpate the healthy uterus and leave the diseased tubes, and say drainage will do the rest.

Dr. Carstens.—Have you come across any case of pus tubes where you thought it was good surgery to remove pus tubes by the vagina?

Dr. Price.—Given a case with vicious disease of the tubes and ovaries without complications above, or if I can dismiss complications of every character above the uterus and appendages, then I should say the vaginal operation is the operation above all others.

Dr. Carstens.—That is what Dr. Blume tries to make out in his paper, and there are cases where the abdominal route is preferable to the vaginal. I have asked these questions of Dr. Price in order to set him right. The way we hear him talk, one would think it was decidedly improper to do vaginal hysterectomy for pus tubes. We all agree to the position taken by Dr. Price; but he has the reputation all over the country of condemning the vaginal route for nearly all pathological conditions, and saying that it should never be practised. Consequently his reputation has suffered in that respect. We now understand his position. Each case is a law unto itself, and must be so considered in dealing with it surgically.

Dr. Price.—I would like to ask Dr. Carstens whether in a given case he can dismiss complications above the uterus and the appendages.

Dr. Carstens.—Sometimes we can, and sometimes we cannot.

Dr. Price.—Now you are in deep water.

Dr. Blume (closing the discussion).—I wish to thank the Fellows of the Association for the kind consideration given my paper. Dr. Price, in his remarks, stated that clamping the uterine arteries practically finishes the operation. This, certainly, cannot be asserted of the cases described in my paper. Here the difficulties commence after the

uterine arteries are clamped. In my opinion vaginal hysterectomy for pelvic suppuration is indicated only in cases with extensive pathological changes, chronic cases, which have passed through repeated attacks of pelvic peritonitis, and these cases cannot be finished in five, seven, or even in fifteen minutes, as some operators have claimed. I fully agree that these easy cases do not require such radical procedure.

With reference to the remarks of Dr. Davis, who advocates vaginal incision and drainage, I can confirm that this simple and conservative procedure often yields good results in acute cases with large accumulations of pus. But in chronic purulent conditions, cases with multiple centres of suppuration, such as under discussion, vaginal section with drainage has not been satisfactory, at least not in my hands. As stated in the paper, I treated two of the patients by vaginal incision and drainage. These women were septic and exhausted; a radical operation would have been too dangerous. Both recovered from their septic condition, but, in spite of washing out the pelvis and packing with gauze for three to four weeks, only a temporary relief was obtained, and the radical operation was required to effect a cure. One of these patients, after three weeks' treatment, refused to be put on the table again, and insisted on the removal of the diseased organs.

Believing that vaginal incision and drainage is a life-saving operation under certain conditions, I at first intended to discuss it in my paper. But my experience with this procedure in chronic suppurative pelvic lesions—and only these are under consideration—is too limited; I, therefore, thought it best not to debate this question. I may be permitted to say, however, that the tubes in these chronic pus cases, after incision and drainage, are not in a satisfactory condition and will never functionate again.

There is one point in my paper that has not been discussed, and that is the importance of the after-treatment of the patients. I called attention to the danger of post-operative infection by vaginal douches. Nothing but water sterilized by boiling should be used in the preparation of these douches.