FOUR CASES OF RUPTURE OF THE UTERUS SUCCESSFULLY TREATED BY PACKING THE TEAR *PER VAGINAM* WITH IODOFORM GAUZE.

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(*Abstract.*)

THE author gives notes of four cases of rupture of the uterus successfully treated by packing the tear *per vaginam* with iodoform gauze. They are the only cases in which he has adopted this method of treatment, and the only cases which he has known recover. All the others (about eight in number) have died in a few hours from shock and hæmorrhage or in a few days from sepsis. Twice he has performed abdominal hysterectomy with a fatal result. After quoting some remarks he made in the 'Obstetrical Transactions' for 1897 upon the great danger of the operation of abdominal hysterectomy in patients shocked by rupture of the uterus, the author expresses the belief that the mortality of rupture of the uterus may be lessened by the use of gauze packing. Having alluded to the advocacy of gauze packing by others, he expresses his own views, for the purpose of discussion, as follows:

In the treatment of rupture of the uterus—

(1) *Abdominal section* is rarely required, and almost solely in cases where the fœtus has passed completely or in great part into the peritoneal cavity. It should be performed rapidly under local infiltration-anæsthesia, and should be followed by

flushing of the peritoneal cavity with normal salt solution and by suture of the tear, if possible, or, if this be not possible, by packing the tear with iodoform gauze and draining by the vagina or abdomen.

(2) *Abdominal hysterectomy* is hardly ever necessary; when the broad ligaments are so much damaged as to endanger the vitality of the uterus vaginal hysterectomy should be performed.

(3) All incomplete tears implicating the broad ligament and most complete tears should be treated by *packing the rupture* per vaginam *with iodoform gauze* after removing clots and fluid blood.

Case 1.—Mrs. J. H—, aged 39, came to see me at University College Hospital in September, 1895. I found her about five and a half months' pregnant, with a peculiar growth on the cervix to be presently described, which I thought was probably a benign adenoma. She was kept under observation, and the growth did not appreciably alter in the course of the next two months. She was admitted to the hospital on November 22nd, 1895, when the following notes were taken.

There was no family history of malignant disease. The patient had been married twenty-three years, and had twelve children, all born naturally, head first, the last three years ago. In December, 1894, she miscarried at the fourth month, this being the third miscarriage in ten or twelve years. Since then she had been bleeding somewhat copiously every two or three weeks. In the last three months she had had no "period," though she had had blood-tinged discharge for the last two months. She complained of pain in the lower part of the abdomen and bottom of the back; she had lost flesh during the last eight months.

On examination the patient was found to be seven and a half months pregnant, the child being alive and in the first vertex position.

The perinæum had been torn. The vagina was of a

dusky red colour. The cervix was greatly enlarged. The anterior lip contained a growth which felt somewhat like a malignant growth, but it was firmer and smoother, and did not bleed at all on examination. Through a speculum the growth on the anterior lip was seen to be of a salmon-red colour, smooth on the surface and not bleeding on examination; it had a smooth rounded edge raised above the surface of the cervix. There was a slight "erosion" on the posterior lip, which had more the aspect of malignancy than the growth, and bled on rough examination. The colour of the tumour contrasted strongly with the dusky blue of the rest of the cervix. On wiping the surface of the tumour it was found to be pitted, and from each of the pits pus oozed on pressure to the extent of several drops; this pus was examined several times and always found to be sterile.

I have never seen a similar condition in the cervix; it resembled an ectropion of the mucous membrane, but was much larger. I thought the case was one of hypertrophy and inflammation of the mucous membrane of the anterior lip, aggravated by pregnancy.

During the next six weeks of the patient's stay in the hospital the cervix was daily swabbed through a speculum with 1 in 3000 sublimate solution. No bleeding occurred during this period, and this fact strengthened my belief that the growth was not malignant.

On January 4th labour set in; at 11 p.m. the pains became stronger, and occurred every ten minutes. The os admitted two fingers, but felt very rigid. Two doses of grs. xxx of chloral hydrate were given.

On January 5th at 5 a.m. the pains increased.

At 10 a.m. the os was 1¼ inches in diameter, exceedingly rigid.

At 4 p.m. the pains continued strong; the cervix was 2¼ inches in diameter.

At 5 p.m. the membranes were ruptured.

At 7 p.m. the cervix was a little more dilated, but was still rigid.

At 8 p.m. a large "caput" formed.

At 8.30 p.m. the patient suddenly collapsed without any increase of pain; a small amount of blood was found in the vagina. The forceps was applied and the child delivered without difficulty in twelve minutes. A considerable loss of blood occurred. The placenta was expressed in about twenty minutes.

At 9.30 the patient was very collapsed and pale. I was called to see her on account of her alarming condition. I found an extensive rupture of the left side of the cervix and lower segment of the uterus, admitting the half hand into the broad ligament, but could not make out that the peritoneal cavity was opened. There was also a slight tear on the right side.

I plugged the broad ligament with iodoform gauze, which was removed on January 7th, and the fundus of the vagina was daily swabbed with 1 in 3000 sublimate solution.

The uterus involuted slowly, the fundus being 3 inches above the pubes on the 21st of January.

On January 13th the growth on the cervix appeared to have diminished, and there was no pus.

On January 18th no thickening could be detected around the two tears.

On January 24th the fundus was still 3 inches above the pubes.

There was very slight fever in the puerperium, the highest temperature in the first week being 100·4°. The patient gradually recovered her strength, and left the hospital on January 30th.

On February 20th the growth on the cervix had increased somewhat in size; the uterus was freely moveable. The growth still felt too smooth for malignant disease, but there was a little ulceration between the edge of the growth and the anterior lip. It was decided to remove the cervix. The patient, however, through some misunderstanding, did not return to the hospital till compelled by pain and loss of blood on May 7th. The growth had

then increased to the size of a Tangerine orange, and the uterus was fixed by the extension of the growth into the tissues around it. There was, however, no bleeding on examination.

The patient died of hæmorrhage and cachexia on January 10th, 1897 (a year after delivery).

The growth on the cervix was examined with the microscope and found to be a glandular carcinoma. In the left side of the cervix was a gap about an inch wide, the edges of which were infiltrated with cancer; this marked the site of the tear, which opened up the broad ligament, but did not appear to have extended to the peritoneum. The growth had infiltrated the vaginal walls.

Case 2. (The detailed notes of this case have been unfortunately mislaid.)—Mrs. C—, a multipara, had a contracted pelvis with a true conjugate of 3½ inches. She had two sisters who also had contraction of the pelvis; on one of these (a little dwarf who has a true conjugate of 2½ inches) I have twice performed Cæsarean section.

Mrs. C— was delivered on October 29th, 1896, after a labour of sixteen hours' duration, which was terminated by podalic version on account of a transverse presentation with prolapse of the arm. The child, a male, was delivered alive, but the patient became greatly collapsed and bled a good deal afterwards, and on removing the placenta a rupture of the uterus was found extending into the broad ligament. I saw her within about half an hour of delivery, when she was suffering from hæmorrhage and shock. I passed my half hand into the tear, but did not find any opening into the peritoneum. The broad ligament was plugged with iodoform gauze, which was removed after a few days. The patient made an uninterrupted recovery, and is at the present time (three years later) in fair health.

Case 3.—F. H—, aged 39, was admitted to University College Hospital at 1.30 p.m. on February 23rd, 1898, with the following history:—She had had ten children (the

last thirteen months ago), but never had instrumental deliveries; her labours averaged about three hours in duration.

On the present occasion the first signs of labour occurred on the 21st, when she had pains which kept her awake all night; at 8 a.m. of the 22nd pains were occurring every half-hour, and at 2 o'clock in the afternoon every ten minutes. The patient had no one to send for assistance till the husband came back at 6.15 p.m., when she sent for a midwife; the pains were now very violent. A doctor was sent for, who diagnosed rupture of the uterus (the head presenting), and with the assistance of two other doctors turned and delivered the child about midnight. The patient had chloroform several times, but she says she felt the tear occur when the largest part of the child was passing (the tear was probably only *increased* at that time). Labour pains did not cease after the child was born for half an hour, when the placenta was removed by hand and an extensive rupture was found. She became collapsed and bled a great deal after the child was delivered, and was in great abdominal pain.

I saw the patient immediately after her removal in an ambulance to the ward (2 p.m.). She was extremely ill and blanched, the pulse very feeble, 115, the respirations 36.

The abdomen was considerably distended and very tender. The peritoneum evidently contained free fluid (blood). After drawing a pint of dark brown urine from the bladder the uterus could be felt quite hard, extending up about five inches above the pubes. The cervix was found to be torn away from the vagina, and on passing the hand through the rupture the bladder also was found to be separated from the uterus, leaving an extensive rent in the peritoneum; and there was also a longitudinal tear in the anterior and left part of the uterus extending above the internal os. A long glass Budin's catheter was passed into the peritoneum, and about two pints of fluid blood were squeezed out through it by pressure on the abdomen; then several large clots were removed from among the intestines

and more blood was squeezed out. When no more blood could be expressed, two long strips of iodoform gauze were introduced by means of long forceps into the peritoneum, and packed between the bladder and the uterus and into the tear, the intestines being held up with the fingers whilst this was done.

A hypodermic injection of morphia (miv) was given, and patient slept well during the evening and retained milk and barley-water in the stomach.

Next morning (24th) the patient was sick three times (temp. 99°, pulse 110). The catheter was passed every eight hours. The condition had markedly improved, and the patient from this time made steady progress to recovery. The plugs were removed on March 3rd and 4th ; they were offensive, and might with advantage have been removed earlier. The highest temperature for the first five days was 100·2°; the highest temperature recorded during patient's stay in hospital was 101·8° (March 1st, 2nd, 3rd). After March 11th the pulse and temperature were practically normal, the highest temperature being 99·4° and most frequent pulse 88.

The patient left the hospital practically well on March 19th, 1898. The uterus still reached three and a half inches above the pubes. The tear in the uterus and vagina had almost healed. The uterus was fairly moveable. When last seen by the doctor who attended her, about a year later, the patient was quite well.

Case 4.—On the 21st of January, 1899, I saw at Bexley, in consultation with Dr. Donkin, Mrs. R—, a multipara (four children) aged 33, who had been delivered by version at 3 p.m. on the previous day. The version had been easy, and was performed under chloroform on account of shoulder presentation, the shoulder being at the vulva. The patient became extremely collapsed after delivery of the child (dead), and the placenta followed in five minutes. The hand introduced into the uterus on account of the bleeding was found to pass into the peritoneal cavity.

The shock was treated with brandy and Valentine's meat juice by mouth and rectum. The pulse varied between 130 and 160 during the night, and was very feeble and irregular; the patient vomited frequently. The temperature, at first subnormal (97·2°), rose to 99·4°, at which height it remained when I saw her at midday on January 21st, nearly twenty-four hours after the accident. The patient was still very collapsed and extremely pale, the pulse being very feeble and 180 to the minute. The abdomen was tender and a little distended; fluctuation could be obtained over the lower part. A piece of membrane, slightly offensive, was hanging in the vagina and was removed, and the vagina was scrubbed with 1 in 3000 sublimate solution. The patient having been drawn over the edge of the bed in the dorsal position, the hand and forearm, carefully disinfected, were passed into the vagina. The uterus was found to be torn away from the vagina and bladder anteriorly, and the left side of the front wall of the uterus was torn through nearly up to the fundus. Small clots were withdrawn by the hand from the peritoneal cavity, and a long rubber tube three quarters of an inch in diameter was passed into the peritoneum, and by pressure on the abdominal wall a large quantity of fluid blood was squeezed out through it. The operation was not very painful, and the patient felt much better and freer from pain when the blood had been removed from the peritoneum. When no more escaped a long piece of iodoform gauze about five inches wide was passed into the peritoneal cavity as high as the top of the tear in the uterus. The lower end was left hanging out of the vagina. The pulse improved rapidly, falling to 120 and 100, at which latter frequency it remained till February 3rd, and gradually fell to normal a month after the accident. The temperature reached 101° on January 26th, and 101·4° on January 30th, and 101° on February 2nd; otherwise the temperature was about 100° till February 6th, was continuously below 100° after February 7th, and fell with the pulse to normal at the end of four weeks.

The lochia were free and not offensive.

The gauze was removed on January 26th, and boric acid douches at low pressure were given. The patient made a very good recovery, and when I examined her on April 27th the uterus was freely moveable, and the scar was quite healed and had only a very little thickening around it.

I have just heard from Dr. Donkin that the patient remains quite well (December 22nd, 1899).

These four cases of rupture of the uterus are the only ones which I have treated by gauze packing, and are the only cases which I have known recover. All the others (about eight in number) have died within a few hours from shock, or a few days from sepsis. Two of these fatal cases I treated by abdominal hysterectomy; of these, one (with extra-peritoneal treatment of the pedicle) died on the operating table, the other (abdominal pan-hysterectomy) died shortly afterwards. This experience led me, in speaking on a case of a ruptured uterus treated by abdominal hysterectomy, shown to this Society in October, 1897, by Dr. John Phillips, to remark that "abdominal hysterectomy was, speaking generally, too severe an operation for patients already shocked by rupture of the uterus. Cases in which the child had escaped into the abdomen required abdominal section, and those in which (as in Dr. Phillips's case) the broad ligament had been torn across, required hysterectomy; but in such a case vaginal hysterectomy was preferable, being a simpler and quicker operation and attended by less shock." ('Obst. Trans.,' vol. xxxix, p. 263).

In my remarks on Dr. Phillips's case I cited two of the above cases in which I had packed the tear with iodoform gauze, and recommended this method of treatment. In 1898 Mr. Mayo Robson alluded to my cases without mentioning my name, and himself gave notes of a successful case ('Practitioner,' 1898, vol. lxi, p. 26). With this exception I am not aware of any publication upon the use

of iodoform gauze packing for rupture of the uterus in the literature of this country, and I have thought, therefore, it might be useful to bring the subject before our Society for discussion.

On the Continent this method of treatment has been recommended by Leopold ('Archiv für Gynäkologie,' 1890, Bd. xxxvi, p. 324); Piskaçek ('Beiträge zur Therapie und Casuistik der Uterusrupturen,' Wien, 1889) and Bar ('Le Progrès Médical,' 1899, No. 28). Leopold makes the suggestion that after abdominal section it is sometimes better to pack and drain with gauze than to remove the uterus, and the suggestion seems to me to be a valuable one. But the mere operation of opening the abdomen is not unattended by shock when performed upon a patient suffering from rupture of the uterus, and it necessitates the administration of an anæsthetic. Abdominal section may be necessary in some cases when the child has escaped into the abdomen; but even then it will usually be advisable, if the shock be great, to wait until the patient has recovered; and while waiting it will be advisable to pack with iodoform gauze if bleeding be still going on. I attach great importance to the removal of all blood from the peritoneal cavity by squeezing it through a long, thick rubber or glass tube passed with the hand through the tear, and by removing clots with the hand. And it might be beneficial to flush out the abdomen through the tube with salt solution. The gauze should be left in for from six to ten days, and gentle, mild vaginal douches should be subsequently employed. I believe that the mortality of rupture of the uterus may be lessened by the method of treatment advocated above, and I shall be glad to hear the opinions of others who have experience of this terrible accident.

My own views, for the purpose of discussion, may be briefly stated as follows:

In the treatment of rupture of the uterus—

1. *Abdominal section* is rarely required, and almost solely in cases where the fœtus has passed completely or

in great part into the peritoneal cavity. It should be performed rapidly under local infiltration-anæsthesia, and should be followed by flushing of the peritoneal cavity with normal salt solution and by suture of the tear, if possible, or, if this be not possible, by packing the tear with iodoform gauze and draining by the vagina or abdomen.

2. *Abdominal hysterectomy* is hardly ever necessary; when the broad ligaments are so much damaged as to endanger the vitality of the uterus, vaginal hysterectomy should be performed.

3. All incomplete tears implicating the broad ligament and most complete tears should be treated *by packing the rupture* per vaginam *with iodoform gauze* after removing clots and fluid blood.

The PRESIDENT observed that absorption of iodoform caused rapid pulse, which is very confusing, as it may be taken as a symptom of sepsis. He would like to hear Dr. Spencer's opinion on this point. The President had already noted very rapid pulse in a case where he packed a very vascular irremoveable capsule, after enucleation of a broad ligament cyst, with iodoform gauze; the pulse was alarmingly high for a time, but there was no evidence of septic infection, and the pulse fell after removal of the gauze. Many foreign authorities objected now to iodoform or any other chemical antiseptic agent in packing wounds and capsules, relying on sterilized gauze. Did Dr. Spencer hold that the iodoform in gauze was an active antiseptic germicide agent?

Dr. PETER HORROCKS thought that a very strong distinction should be made between cases of laceration of the cervix and rupture of the body of the uterus. In two of Dr. Spencer's cases the laceration had not penetrated the peritoneal cavity, and had been confined apparently to the cervix as far as the internal os. Such cases were not uncommon, and often did well without any gauze packing, or indeed without any treatment at all, and the chief point was to stop hæmorrhage and see that everything was done aseptically. The cases in which the peritoneal cavity was opened by the rupture were, as a rule, much more severe and much more dangerous. He had had several cases, and the results had been highly satisfactory in recent years. He attributed this not alone to the packing by gauze, but to the fact that the labours had been conducted aseptically by the accoucheur, and so the parts had not become

septically contaminated before treatment. He gave details of a case seen many years ago with the late Dr. Wilton and his partner Dr. Bosworth, of Sutton. It was a case of difficult transverse presentation in which the uterus ruptured during delivery, the rent extending from the cervix up to the body of the uterus, opening the peritoneal cavity. When he arrived the intestines were in the vagina. They were washed and put back, and the rent was sewn up, but the patient died from peritonitis in about forty-eight hours. This was in the pre-aseptic days; but a few years ago he saw a case of rupture of the uterus with Dr. Henry of Lewisham where the rent was due to precipitate labour, and where the tear was so extensive that it was easy to pass the whole hand into the peritoneal cavity. In this case he put in two silkworm gut sutures, so as to draw the gaping wound together somewhat, and then he packed with sal-alembroth gauze after washing out with a solution of Tinct. Iodi, a drachm to one pint. Thinking that the gauze would not only drain the peritoneal cavity, but also would suck up the lochia, he recommended the removal of the gauze and washing out with the iodine solution every twelve hours for the first few days, and once a day afterwards. This was done under chloroform every time, and the patient made a most excellent recovery without pyrexia or offensive discharge. One of the stitches, however, gave trouble, in that it had to be removed under an anæsthetic some nine months afterwards. Dr. Henry had published the case in the 'West Kent Med.-Chir. Soc. Trans.' Since then the lady had been confined of a living child, which with Dr. Henry he had brought on at the eighth month fearing that the old rupture might give way, particularly as the patient nearly always had large children. He gave details of three other cases of grave rupture of the uterus penetrating the peritoneal cavity, in all of which sal-alembroth gauze was used to pack with, and Tinct. Iodi solution had been used as a douche. In each case the gauze was removed every twelve hours for the first few days, and every twenty-four hours for the next few days, and each patient had made an excellent recovery. He thought Dr. Spencer had left the gauze in too long, and that it rapidly became thoroughly soaked with lochia, when these were abundant, as during the first few days after labour. Moreover, there was the danger that the gauze might become adherent to the intestines, and so cause trouble on trying to remove it. He did not think hysterectomy, either abdominal or vaginal, was to be recommended in rupture of the uterus, when everything in connection with the labour had been conducted aseptically. He thought the best treatment in cases which were not capable of being treated in the way already mentioned, was to open the abdomen and sew up the tear with sterilised silk. He gave details of a case in which he had done

this successfully. The rent was along the anterior wall of the uterus, and extended from the os internum upwards. The lady was under the care of Dr. Shadwell, of Walthamstow, and she made a good recovery, although about the tenth day the whole abdominal wound gave way, and the bowels protruded during a severe fit of coughing soon after the removal of the stitches. Dr. Shadwell washed the bowels with boracic lotion, replaced them in the abdomen, and put in some silver wire sutures, and the patient did well. Finally, he did not think any special kind of gauze was essential. So long as it was aseptic that was probably enough. He had never used anything but sal-alembroth gauze himself, and he saw no reason to change it for iodoform gauze.

Dr. LEWERS said he had had a case of rupture of the uterus at the London Hospital about eighteen months ago in which a method of treatment similar to Dr. Spencer's was adopted. The rupture was one through the cervix posteriorly into the peritoneum. Iodoform gauze was packed into the rent so as to project into the peritoneal cavity, and it was left there for some days. The patient was several times in an extremely critical condition during the first week, with very rapid feeble pulse and other alarming symptoms, but she eventually recovered. He noticed that in one of Dr. Spencer's cases he had observed exudation on pressure of puriform fluid from several openings on the surface of a cervix, which ultimately proved to be the seat of malignant growth. He had noticed the same phenomena for the first time some five years ago, and had since noticed it in other cases of cancer of the cervix. He was now accustomed to look upon the sign as a valuable indication of cancer of the cervix. Referring to the material used for packing into the peritoneum, either in cases of complete rupture of the uterus or in cases of abdominal section, he believed that the iodoform gauze commonly supplied varied a good deal in strength, sometimes, for instance, being much yellower than at other times. Except when the less highly iodoformed gauze was employed he was sure there was a good deal of danger of iodoform poisoning, and of late he had used carbolic gauze in the peritoneum with satisfactory results in cases where some kind of gauze drain was required.

Dr. HERMAN said that suture of a ruptured uterus was useless unless the edges of the wound were brought accurately together throughout the whole length. One or two sutures far apart were worse than useless, for the spaces between them might form pockets in which secretions might be retained and decompose. In cases in which complete suture of the wound could not be done, he thought packing with iodoform gauze was the best practice, and he congratulated Dr. Spencer upon his successful application of it. If the rent was so situated that

packing with gauze was impracticable, he thought vaginal hysterectomy would give the patient the best chance. The vaginal extirpation of the puerperal uterus had not been done until recently, probably because most obstretricians, as he himself, had supposed that the removal of the uterus immediately after delivery would be a difficult and dangerous thing; but those who had done it had found it a very easy operation.

Dr. DRUMMOND ROBINSON was much interested in Dr. Herbert Spencer's paper, and also in the reports of instances of successful treatment of the ruptured uterus mentioned by other speakers. His experience of this condition was not large, but as he thought that every addition to our knowledge of the subject was valuable, he would mention his cases. He had had three cases of ruptured uterus under his care. In one case the patient died within a couple of hours of a complete rupture of the uterus. The other two cases recovered. The first of these was an incomplete rupture into the left broad ligament, the result of a neglected shoulder presentation. No suitable drainage material was at hand, so the rupture was not packed with gauze or otherwise drained. When seen again the patient had exhibited no bad symptoms, and she was therefore not disturbed. She made an uninterrupted recovery. No drainage of any sort was used. There was very little hæmorrhage at the time of or after the rupture. The second successful case, which occurred some two years ago, was that of a multipara of about forty. Labour had been tedious, and forceps were at length used by the medical man in attendance, and the child delivered (dead) without difficulty. The patient (always anæmic) now became markedly collapsed, and on vaginal examination a piece of material (looking like fœtal membranes) the size of the hand was seen protruding from the vulva. On tracing this upwards it was found to be a flap of peritoneum, which projected through a large rupture in the anterior wall of the lower uterine segment. The cervix was completely split anteriorly up to the rupture in the lower uterine segment. The bladder was separated from the supra-vaginal portion of the cervix uteri, and was uninjured. The flap of peritoneum was cut off, and the rupture packed with cyanide gauze; this was changed after three days. The patient was very ill for nearly a fortnight, but subsequently made a good recovery, and has since given birth to another child quite normally. A few days after the rupture a sinus developed at the umbilicus from which serous fluid exuded. This healed up in a few days.

Dr. HERBERT SPENCER, in reply, said that two of his cases were complete ruptures and two incomplete. The distinction between laceration of the cervix and rupture of the body of the uterus could not be sharply drawn. Most cases of the latter did actually involve the cervix. Slight cases of laceration of

the cervix up to or even beyond the vaginal insertion were of small importance; but where, as in his two cases, the cervix and lower segment were lacerated so extensively as to admit the half hand into the broad ligament, and there was much hæmorrhage and shock, the danger was great. The extent of the laceration in the uterus was of less importance than the extent of the laceration of the vessels and tissue of the broad ligament. He had known death to occur where a cervical laceration was so short as not to involve either os. It was his experience and belief that these severe incomplete lacerations actually killed more women than the complete. He wished again to emphasise the great danger of abdominal section in rupture of the uterus, and agreed with the remarks of Dr. Herman as to the uselessness of partial suture. He considered it undesirable to inject an irritant like iodine solution into the peritoneal cavity, and dangerous to give chloroform and change the gauze every twelve hours; iodoform gauze might be left in for six days or longer. The cases related by other speakers strengthened his belief in the value of gauze packing. Though iodoform gauze was not free from risk, he believed, in anæmic cases like those under discussion, it was less dangerous than cyanide or carbolic gauze, or even sterilised gauze, which would not long remain aseptic in the vagina.