

VAGINAL CELIOTOMY

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WITH the abandonment of Freund's abdominal operation, and its substitution by vaginal extirpation of the uterus, we had demonstrated for the first time the facility of entrance into the peritoneal cavity through the anterior or posterior vaginal fornix.

The abdominal operation introduced in 1878 was followed

by such a high rate of mortality that the more favourable results obtained by the vaginal operation, with its improved technique, led to the latter being almost universally adopted.

Lately, the pendulum has swung in favour of the abdominal route in the treatment of cancer of the cervix, but the results do not yet warrant our substituting it for the vaginal operation.

As far back as 1857, Atlee opened and evacuated a collection of purulent fluid, with subsequent separation of adhesions, through the posterior fornix.

The case was not published in detail, but from the short description given of it by Goodall, it would appear to have been a case of suppurating ovary or cyst, with removal of the sac in detached pieces. In 1870 Thomas performed and described the technique of vaginal ovariectomy, and we have at the same time the report of a case of suppurating cyst similarly treated by Goodall, a dermoid cyst the size of an orange by Battey, and simple cysts removed by Davis, Gilmore, and Wing, making in all a record of six vaginal ovariectomies about this period.

Goodall in his paper states that the indications for the operation must be limited, and that it cannot replace abdominal section, although the latter may follow the vaginal operation when it cannot be completed, and he points out the advantage of good drainage obtained through the vaginal incision.

About this time such startling records of success by abdominal section were forthcoming, that the vaginal operation fell into oblivion to such an extent that Hegar and Kaltenbach, in the edition of their book on *Operative Gynaecology*, published in 1881, state that the vaginal operation need only be considered of use in those rare cases where a small ovarian tumour was found associated with vaginal prolapse.

With Müller's proposal in 1882, of splitting the uterus vertically to facilitate its removal, and that of Fritsch in 1886, of opening the vesico-uterine pouch as an early step in extirpation of the uterus, we see indications of advancement in technique favouring the adoption of the vaginal route. In 1887 Gusserow treated pelvic hæmatocele by vaginal incision. About the same time Doyen pointed out the importance of the vesico-

uterine space in pelvic surgery, when he published a record of 100 cases of pelvic disease so treated.

Sänger, when discussing the treatment of retroflexion of the uterus in 1888, suggested, but did not at first carry out, vaginal fixation, by making an incision through the anterior fornix, and fixing the fundus to the vaginal wound. In 1892 MacEnrodt carried out Sängers suggestion of vaginal fixation by first fixing the fundus to the vaginal wound without opening the peritoneum, but, finding the results unsatisfactory, he subsequently opened the pouch, and fixed the fundus to that part of the peritoneum covering the bladder. In 1893 Dührssen proposed the name "Vaginal Laparotomy" for an operation he had performed for retroflexion in 1890, and from 1893 onwards, systematically, and with increased frequency, reporting 182 cases so treated, and extending the indications for anterior colpotomy to removal of myoma from the uterine wall and diseased appendages. About the same time Martin wrote in favour of the operation. The publication of the English translation of Dührssen's book made his operations and methods known in this country, so that the limitations and indications for the vaginal route have already been frequently discussed.

It is with the hope of eliciting the opinion of the Fellows of this Society on this subject that I venture to bring it forward to-night.

I shall not take into consideration, at present, cases of vaginal hysterectomy for uterine disease or pelvic suppuration.

TECHNIQUE.

It will be unnecessary for me to describe in detail the steps of an operation which essentially consists in those adopted in the first part of vaginal hysterectomy. The importance of taking the same precautions in preparing the patient for vaginal as for abdominal section will be shown when referring to some cases, and also the necessity of rendering the uterus as aseptic as possible by preliminary curetting when there is any foetid uterine discharge. As with abdominal section, the operation of vaginal cœliotomy may be considered as having three steps:— (1) Opening into abdomen; (2) Removal or examination of

diseased organs; (3) Closure of the vaginal wound, completely or partially, to permit of drainage.

The opening into the abdomen may be carried out through the anterior fornix (advocated by Dührssen), posterior fornix (MacEnrodt), or by adopting either route, according to the position in the pelvis of the part to be operated on, as recommended by Wertheim. Personally I prefer the posterior incision.

In anterior colpotomy the incision may be transverse or longitudinal, the latter being more favourable for the safety of the ureter. On pushing through the cellular tissue with the finger between the uterus and bladder (easy in multiparous, but frequently requiring the aid of scissors in nulliparous patients) the peritoneum is exposed and divided. I puncture the peritoneum with long sinus forceps, and open the wound to the desired extent. The fundus uteri and its appendages may be brought through the opening, examined by inspection, and if any of the parts have to be removed, the broad ligament may be ligatured and divided. Traction on the fundus through the posterior fornix is to be avoided on account of the risk of injuring the bladder.

Drainage, if deemed necessary, is best carried out through the posterior incision. If not, the wound may be completely closed. In my own practice I introduce an iodoform gauze drain, which is removed in twenty-four hours, and I leave the wound to close without sutures.

The after-treatment is the same as for vaginal hysterectomy.

INDICATIONS.

1. *Retroflexion of the Uterus.*—Although attempts had previously been made to retain the uterus anteverted by vaginal fixation in cases not amenable to pessary treatment, it was only with the elaboration of the operation as suggested by MacEnrodt and Dührssen that this operation for retroflexion came to have more than a limited trial.

Few will probably admit of the necessity for the frequency with which those Berlin gynecologists resort to this plan of treatment in uterine displacement. In support of his claim Dührssen quotes a collection of cases by Neugebauer where

harmful results were produced by neglected pessary treatment. Of those cases Neugebauer states that eight died from sepsis and peritonitis as the direct effect of the pessary, and eight developed cancer (supposed to have some connection with the long-continued irritation of the pessary).

He further reports 23 cases of perforation into bowel.
 20 " " " bladder.
 10 " both viscera perforated.
 2 " uretero-vaginal fistula.
 4 " perforation into pouch of Douglas.
 6 " perforation of uterus.

Against these unfavourable results as the consequence of neglected pessary treatment, must be reckoned the constantly increasing number of reported cases where operative interference (including Cæsarean section) has been found necessary in cases of labour following on vaginal fixation.

I have myself treated two cases of mobile retroflexion of the uterus by Dührssen method of vaginal fixation where the leading symptoms (pain and dysmenorrhœa) had not been relieved by prolonged pessary and general treatment. Both patients improved, the uterus remains in its normal position, but as pregnancy has not occurred in either case, the most important question of its effect in labour in estimating the value of this plan of treatment cannot be judged of by those cases.

2. *Inversion of the Uterus.*—In cases of inversion, where reduction by ordinary means fails, and before resorting to the more radical treatment of amputation of the uterus, Kustner first suggested the introduction of the finger through a posterior vaginal incision to dilate the constricting ring.

He has reported several cases where this method, alone or combined with an incision through the posterior uterine wall, succeeded. More recently still, Kehrer reports a case successfully treated by anterior colpotomy, with vaginal fixation of the uterus. Spinelli believes that retroversion with fixation frequently follows posterior colpotomy, and for this reason Kehrer adopted the anterior route. Dr Struthers last year

reported a case which Dr Hart had successfully treated by posterior colpotomy.

3. *Chronic Ovaritis with Adhesions (Perimetric).*—This was the first indication for which Dührssen recommended the vaginal route to enable him to remove adhesions matting together the pelvic organs. He combined the operation with vaginal fixation in cases of retroversion, regarding the latter proceeding as helpful in preventing subsequent adhesions.

The presence of adhesions frequently causes no symptoms, as shown by their being found in post-mortem examinations of cases where no pelvic trouble had been complained of during life. Yet pelvic pain in many cases appears to have no other cause.

If the adhesions be recent, they may be removed by bimanual manipulation, as practised by Schultze and Thure Brandt. When a spectator of this plan of treatment by Thure Brandt some years ago, the impression I formed was rather that of a gymnastic display than a method ever likely to be adopted in this country.

If the adhesions are of long standing, abdominal section has frequently been performed.

The following are illustrative cases treated by vaginal section:—

CASE I. (æ. 23).—Complained of backache, aggravated by movement of the bowels, dating from an abortion twelve months previous to admission to hospital; last confinement two and a half years before that. On examination, uterus anteverted and enlarged. Left ovary enlarged, with extreme tenderness or pressure here. *Anterior Colpotomy*—Both ovaries adherent; adhesions separated by one finger introduced through the anterior fornix, the other hand acting through the abdominal wall. Both ovaries being found apparently unaffected were returned, and the operation completed.

CASE II. (æ. 28).—Pain in left side and dysmenorrhœa of three years' duration; married eight years—three children;

had been under prolonged treatment by douches and rest with little effect. *Posterior Colpotomy*—Left ovary fixed; right easily drawn down and inspected; adhesions surrounding left ovary removed by manipulation, and organ replaced.

CASE III. (æ. 40).—Pains left side and back, of ten years' duration, dating from a confinement at that time; under treatment by douches and rest on two occasions for six weeks with only temporary benefit. *Posterior Colpotomy*—Both ovaries fixed by adhesions, which were separated, and organs returned.

RESULTS:—In the first case, twelve months after operation, the report is satisfactory; in the second case dysmenorrhœa is relieved, but there is still pelvic pain complained of; and in the third case the result was complete relief two years after operation. Case II. illustrates the difficulty in deciding what treatment to adopt in cases where pelvic pain, associated with fixed ovaries, persists after prolonged general treatment. Such a case might come under those referred to by Hart when speaking of abdominal section for tubal disease in a recent address, where he says:—"While a low mortality is a *sine qua non* in such, we must not forget that an important point is to find out whether in the long run the ultimate result has in non-suppurative cases justified the mutilation. This holds especially true for neurotic cases."

4. *Prolapse of the Ovary*.—In the treatment of this condition, if the ovary be movable and associated with backward displacement of the uterus, the introduction of a pessary frequently suffices to give relief. If fixed, and palliative treatment fails, the removal of the ovary may be justifiable, as in the following cases:—

CASE IV. (æ. 18).—Complained of intense pain on defecation, of six months' duration. The uterus was retroflected; left ovary enlarged and prolapsed below it. Pessary treatment greatly aggravating the condition, the ovary was removed by posterior colpotomy, and the uterine displacement subsequently treated by a pessary with complete relief of symptoms.

CASE V. (æ. 28).—Backache, dysmenorrhœa, dating from confinement four years previously; uterus retroverted, with an enlarged prolapsed ovary on the left side. Treated for three years with pessary and plugs without relief. *Posterior Colpotomy*.—Ovary removed; patient relieved and able to wear a pessary with comfort.

Extra-uterine Pregnancy.—The route to be adopted here depends on the nature of the case. If the symptoms point to a diffuse hæmorrhage from intra-peritoneal rupture without the formation of an hæmatocele, it is universally agreed that abdominal section, immediate, or as soon as the patient has rallied from the state of primary collapse, is the only treatment.

If the condition be diagnosed before rupture up to the eighth or tenth week, the intact tube may be removed by vaginal section. Dührssen gives a table of nineteen cases operated on through the anterior fornix, most of them being cases of incomplete tubal abortion, with one death. Becker and Donald likewise report successful cases. MacEnrodt reports six successful cases operated on through the posterior fornix, removing the affected tube in each case.

In cases first seen after the formation of an hæmatocele, the line of treatment is one on which there is diversity of opinion. Many such cases get well without treatment, absorption slowly taking place. This, however, may require several months, during which time suppuration of the hæmatocele may occur, or pressure symptoms may continue. On this account some recommend abdominal section in all cases of hæmatocele, where the symptoms point to ectopic pregnancy as the cause. Kustner is of opinion that it is not advisable to operate through the vagina in any case, as the parts are not so readily seen as from above. In this opinion he is supported by Sängner, Fehling, and others. In retro-uterine hæmatocele, when the pouch of Douglas is distended with blood and causes symptoms, posterior vaginal section is probably the best line of treatment. This is approved of by Fritsch, Zweifel, and Kelly. The advantages given by Kelly are:—

- (1) Tubes and ovaries are preserved.

(2) Clots are removed without opening up the general peritoneal cavity.

(3) The operation is practically free from danger.

Of twelve cases reported by him so treated, however, he had to open the abdomen once in order to arrest hæmorrhage from the sac.

The following are short notes of two cases of pelvic hæmatocele treated by vaginal incision :—

CASE VI. (æ. 22).—Complained of abdominal pain and vaginal hæmorrhagic discharge of three weeks' duration ; three children, youngest eight months. Symptoms appeared suddenly ten days after expected date of menstruation. On examination, uterus is felt above the symphysis, and pushed to the front by a hard, tender swelling felt through the posterior and left lateral fornix ; temperature 101°, pulse 120. *Posterior fornix* incised, clots removed ; cavity irrigated with sterilised water, and plugged with iodoform gauze ; no trace of ovum found. Patient left hospital ten days after admission, and subsequent history is that of no pelvic trouble and another normal confinement.

CASE VII. (æ. 29).—Pain in lower part of abdomen and left side, with vaginal hæmorrhagic discharge of *six weeks'* duration. Symptoms came on suddenly after six weeks' amenorrhœa ; one child seven years old. On examination, a swelling, size of a cocoa-nut, behind and to the left of the uterus ; incised through posterior fornix ; irrigated and drained with gauze ; removed on third day. Patient left hospital, by her own desire, on tenth day, feeling quite well. On examination three days later, there was still a slight swelling felt in the posterior fornix, with vaginal hæmorrhage. Fortnight later she was quite well, and nothing felt on pelvic examination, which condition continues now fourteen months after operation.

Ovarian Cysts.—Reference has already been made to the removal of small ovarian cysts through the posterior fornix by Atlee in 1857. This route has now been re-introduced

for the removal of ovarian tumours, although not with universal favour.

Schauta reports twenty-three cases of ovarian cysts removed through the anterior fornix, with one death. He limits the cases suitable for the vaginal operation: (1) To movable tumours; (2) to those free from adhesions to the bowel; (3) those non-malignant in character, malignant tumours not readily admitting of reduction in bulk. As it may, however, be difficult or impossible to diagnose those contra-indications before operation, the number of cases suitable for removal by this route must, according to this authority, be very limited.

Bumm reports five cases so treated; in one case the uterus had to be removed to arrest hæmorrhage, and in another the operation had to be completed by abdominal section. Wertheim reports two cases of large intra-ligamentary cysts removed through the vagina without opening the peritoneum. Fehling operated on seven large cysts through the anterior fornix, but is not a partisan to the operation on account of his inability in some of the cases to complete the operation by the vaginal route. Wound infection is regarded by some as the chief contra-indication to the vaginal operation. MacEnrodt and Lohlein both publish a list of successful ovariectomies through the posterior fornix, the tumours varying in size up to that of a child's head. In this country, Donald, in support of vaginal ovariectomy, records twenty cases with one death (hæmorrhage), and regards it as the better route in the removal of all cysts reaching as high as the umbilicus, and in the absence of indications of adhesions to the anterior abdominal wall.

My own experience of vaginal ovariectomy has been limited to the removal of cystic tumours not exceeding a lemon in size.

CASE VIII. (æt. 27).—Complained of bearing-down pains of three years' duration, three miscarriages, no full-time children. On examination, a movable swelling the size of a turkey's egg was felt to the left and behind the uterus.

Operation.—Posterior vaginal incision; dermoid cyst enu-

cleated, pedicle ligatured, and iodoform gauze drain introduced; a febrile recovery; left hospital in fourteen days.

CASE IX. (æ. 18).—Married eight months, complained of dysmenorrhœa, frequent and painful micturition. On examination, movable tumour size of an orange felt behind the uterus. Posterior vaginal incision; a papillomatous ovarian cyst removed; operation completed as usual; a febrile recovery; discharged on the fourteenth day.

CASE X. (æ. 32).—Admitted to my ward from O. P. department on account of a hæmorrhagic discharge following an early abortion. On examination under chloroform, with view of ascertaining and removing the cause of the menorrhagia, a cystic movable swelling the size of a Tangerine orange was felt behind the uterus. The uterus was curetted and plugged with iodoform gauze, followed by posterior colpotomy to remove what proved to be a unilocular ovarian cyst. The patient had *not* been prepared with the same precautions as for abdominal section. The result was that on the following day there was abdominal tenderness, pulse 116; temperature 102°. Next day, tympanitis and increase of abdominal pain; pulse 122, temperature 102.4°. She had now the appearance of commencing septic peritonitis, and was ordered an enema containing ʒij of spirits of turpentine. This was followed by rather severe diarrhœa lasting several hours, but accompanied by improvement in general condition of the patient, which continued, and patient was discharged one month after admission.

In Diseases of the Appendages.—With Pean's proposal in 1886, to remove the uterus per vaginam in suppurative conditions of the appendages, originated the idea of removing them through the anterior or posterior fornix without extirpation of the uterus. That the uterus is unaffected to any serious extent in many such cases is shown by the frequency of pregnancy following unilateral removal of diseased appendages, and any inflammatory condition of the endometrium accompanying tubal disease can in most cases be satisfactorily treated through the dilated cervix.

In 1891 Lwoff reported twelve cases of tubal disease treated by posterior colpotomy, and Teploff about the same time published twenty-seven cases. In all, the appendages were deep in the pouch of Douglas, and adherent.

MacEnrodt advocates the posterior incision, and quotes in its favour five successful cases; while Dührssen reports a long list of cases treated through the anterior fornix.

He regards the cases as most suitable for vaginal extirpation:—(1) Those where the tubal swelling is mobile. (2) Adherent but lying low in the pouch of Douglas, and free from adhesions to the lateral pelvic wall.

Smith reports eleven cases of vaginal cœliotomy for diseased appendages, including six cases of pyosalpinx. Of the latter, three recovered, two died, and in one it was necessary to complete the operation by abdominal section.

The difficulty in accomplishing the complete removal of tubal swellings through the vagina on account of adhesions, with the risk of injuring adherent viscera, is exemplified by the two following cases:—

CASE XL (æet. 31).—Was seen by me three years ago, complaining of more or less constant pain in the left iliac region, present previous to, but aggravated since, her marriage two years before coming under observation. She had not been pregnant, and there was no evidence to be obtained pointing to gonorrhœal infection. On examination there was found what I supposed to be an enlarged tender left ovary. I regarded the case as one of ovaritis not requiring operative treatment, and ordered rest and douches. This treatment she carried out for a couple of months, when she resumed her household duties for eighteen months, during which period there was still pelvic pain complained of.

Three weeks previous to my seeing her for the second time the pain had become greatly aggravated. On examination I found extreme tenderness in the left iliac region, with general abdominal tenderness; temperature 104°, pulse 136. P.V. there was found a tender oval swelling behind and to the left of the uterus. This I regarded as a pus tube or suppurating ovarian cyst. On the following day I opened through the posterior

fornix, with the hope of removing the swelling, which proved to be a pus tube with adherent ovary. During my manipulation to separate adhesions the tube burst, with escape of foetid pus through the vaginal wound. After irrigating with sterilized water, I made further attempts to separate firm adhesions to the rectum, but as I saw risk of tearing the rectal wall, I sutured the edges of the tubal opening to the vaginal wound, and plugged with iodoform gauze. This I removed on the third day, and replaced it with a drainage-tube retained for ten days. The discharge gradually ceased, and in six weeks the patient was able to resume household work. Her condition now, one year after operation, is quite satisfactory. There is no pelvic pain. Menstruation is regular and painless.

CASE XII. (æet. 24).—Married five years, no children; attended my Out-patient Department complaining of left-sided pain and backache, dating from shortly after marriage, and aggravated by menstruation. Clear evidence of gonorrhœal infection. Per vaginam there was found a cystic, mobile swelling, behind and to the left of the uterus, about the size of a hen's egg, regarded as probably tubal. *Posterior colpotomy* showed it to be a hydrosalpinx (left-sided), having all the appearance of a coil of small intestine. It was extremely thin-walled, and during manipulation, to ascertain its connections, it burst with escape of clear, watery fluid. It was adherent above. I made no further attempts to remove it, as from the thinness of the walls and nature of the fluid I did not consider this would be any great advantage. I stitched the opening to the vaginal wound. The results so far, eight months after operation, are satisfactory. On examination now there is no pelvic pain or trace of pelvic swelling.

With regard to myoma of the uterus I have not yet seen a case which warranted enucleation through the anterior or posterior fornix. Duhrssen reports eighteen cases of small myomata so treated, with two deaths, but those were complicated with suppurative disease of the appendages. The difficulty in accepting this plan of treatment is obviously the rarity in such cases of symptoms demanding operative interference.

The remaining conditions which may be treated by the vaginal route are:—

1. In cases of phthisis, cardiac affections, and other conditions likely to be aggravated by subsequent parturition. Dührssen advocates and reports eighteen cases where the tubes were exposed, ligatured, and divided by anterior colpotomy.

2. For diagnostic purposes, as, for example, cancer of the cervix, to ascertain the extent of glandular infection, as recommended by Martin.

3. Cases of perforation of the uterus formerly treated by extirpation, by opening either through the anterior or posterior fornix, the wound may be exposed and sutured.

4. Tubercular ascites. Lohlein reports six cases treated by incision through the posterior fornix. In five of these the result one year after operation was satisfactory, as regards general condition, temperature, and non-recurrence of abdominal swelling.

Advantages claimed for the vaginal over the abdominal route are:—(1) Shorter convalescence. Fourteen days as compared with three to four weeks. (2) No abdominal cicatrix, therefore no risk of hernia, or subsequent formation of intestinal or omental adhesions. (3) Less shock on account of the peritoneum being less exposed. (4) Drainage, if necessary, is best carried out through the posterior fornix.

Its drawbacks are:—(1) On account of the limited space dense adhesions are more difficult to manage, and consequently greater danger of wounding viscera (bladder and rectum). (2) Greater difficulty in rendering the vagina aseptic. The latter objection, however, is probably exaggerated.

Cases suitable for the vaginal route (other means of treatment failing) I believe to be:—(1) Mobile retroflexion, causing symptoms at or about the menopause. (2) Chronic ovaritis with adhesions. (3) Prolapse of the ovary with fixation. (4) Ovarian cysts, small, whether dermoid, simple, or papillomatous. (5) Pelvic hæmatocele. (6) Unilateral, mobile, tubal swellings.

Cases unsuitable for this treatment are:—(1) Large tumours. (2) Old standing tubal disease with dense adhesions, where the complete removal of the appendages is necessary.

Professor Simpson thought the communication of Professor Kynoch a very interesting and valuable one. It contained the record of important observations and focussed information that was widely scattered in gynecological literature. He (Professor Simpson) agreed, generally, with the author as to the indications for vaginal coeliotomy, but had himself no experience of the anterior colpotomy except as a stage in hysterectomy. He had never been convinced that it was desirable to deal with the posterior displacements through the vaginal roof. To be sure, Neugebauer had diligently collected from all kinds of records an imposing array of instances where pessaries have done mischief. But if one thought of the crowds of women who wore pessaries, the wonder rather was that more damage was not done by them, and there was no inherent danger in their application, whilst one could never open into the peritoneum without recognising that the operation was attended with some degree of danger. He was struck with the statement of Dr Alexander of Liverpool, in his recent brochure, that one of the results that might follow the shortening of the round ligaments was the relaxation of uterine adhesions, and as such adhesions had been regarded as one of the indications for vaginal coeliotomy in posterior displacements, the cases in which peritoneal interference was admissible became more restricted. The dangerous pregnancies and labours that had followed vaginal fixation formed an absolute contra-indication to any such operation in women during the reproductive period of life. He (Professor Simpson) agreed with the author also in regard to the value of this mode of treatment in some cases of hæmatocele which, in his own experience, had given satisfactory results. In general, he (Professor Simpson) preferred the abdominal route in the great majority of operations on the pelvic organs. Especially when the patient was in the Trendelenburg position, a much more satisfactory view was obtained of the field of operation, so that one felt more sure of all his proceedings. In considering the choice between abdominal and vaginal coeliotomy, there was one point that sometimes guided to a decision, viz., whether the patient was parous, or nulliparous, or virgin. In the latter conditions the narrowness of the vaginal orifice and canal made the vaginal operation

difficult or impossible. In looking at the history of the vaginal operation, due credit should always be given to Dr Battey of Rome, Georgia, who, in proposing and carrying out what he called "Normal Ovariectomy" for inducing the menopause, removed the ovaries through the vaginal roof, and established the feasibility and safety of the operation nearly thirty years ago.

Dr Brewis considered the outstanding advantages of vaginal section to be the absence of an abdominal scar and of the possibility of weakening the abdominal wall, and the short and easy convalescence. The method compares unfavourably with abdominal section in the matter of obscurity and difficulty in treating adhesions. There may also be difficulty from want of room in a small pelvis, and danger from hæmorrhage owing to the high position of the ovarian artery, and the difficulty of securing it. He considered the following cases specially suitable for vaginal section:—

1. *Early ectopic gestation.*—Where the sac occupies the pelvis, bulges down the vaginal roof, and pushes the uterus upwards and forwards, the swelling is roofed over by adhesions, is practically extra-peritoneal, and is easily and safely evacuated by vaginal incision.

2. *Ovarian tumours which are partly pelvic.*— Provided there are no intimate adhesions over the upper part of the tumour the operation is easily and satisfactorily accomplished. If the operation, owing to adhesions, cannot be completed by the vaginal route, opening the abdomen adds little to the risk.

3. *Evacuation of pus.*—Every pelvic abscess that does not point above Poupert's ligament should be treated by vaginal section. The evacuation of even a little pus may bring down temperature and hasten resolution. An incision into a cellulitic exudate may have the same good result. Evacuation is specially useful as a temporising measure when removal of pus tubes by abdominal section would be fatal. The tubes can be removed afterwards by abdominal section when the patient's general condition is improved. Ascitic fluid may also be safely evacuated through the posterior fornix.

4. *Exploratory incision.*—The advantages of the vaginal route for exploratory purposes are very manifest.

5. *Conservative operations.*—Adhesions can be separated, and sections of the ovaries and tubes can, in many cases, be made with great ease by this method.

6. *Diseased uterine appendages.*—When the ovaries and tubes are low placed they may be easily removed by anterior or posterior colpotomy. If the uterus is retroverted the fundus may be secured to the incised anterior vaginal wall after the appendages have been removed.

Dr Brewis had performed eight vaginal sections, exclusive of hysterectomy and abscess cases. Three of the cases were ovarian cystomata, and one was a dermoid tumour of the ovary. In these cases the tumours were of considerable size, reaching to the umbilicus, and the operations presented no difficulty. He also operated on three cases of diseased appendages and on one extra-uterine gestation. All the cases recovered easily and rapidly.

Dr Haultain had listened with much interest to the arguments brought forward by Dr Kynoch in favour of the vaginal route for removal of diseased pelvic organs. Personally he had only a limited experience of this method, as he had found the abdominal route so satisfactory that there was no inducement to depart from it. Although admitting the advantages of a shorter convalescence, he thought that by no means counterbalanced the disadvantages of the want of sight in the performance of the operation. When adhesions existed, these by the vaginal route had to be separated in a haphazard way, similar to what used to be done in the earlier days of abdominal section with a short incision. This, however, with the advantages of the Trendelenburg posture, pelvic operations by the abdominal route were immensely more satisfactory, by reason of the fact that the operator could follow by sight all his manipulations. The abdominal scar was in the main a sentimental objection; the risks of ventral hernia were extremely slight now that the practice of drainage through the abdominal wound had been almost abandoned. For the evacuation of drainage of suppurating hæmatoceles and a similar treatment of embedded pyosalpinx the vaginal incision was without question the correct one, but for the removal of uterine appendages and ovarian and

other pelvic growths he would strongly advocate abdominal incision.

Dr Church had seen a good many cases of ovarian and uterine tumour in which the questions arose whether the operation for removal should be done through the abdominal wall or through the vaginal roof. He was of opinion that almost all tumours should be removed by opening into the abdomen. If the surgeon should attempt the vaginal operation and fail, and then open the abdomen, he considered that there was much more risk to the patient from shock, than if the abdominal operation had been primarily done. Before the second operation both patient and operator might be well-nigh exhausted.

Dr Kynoch replied.