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THE OPERATIVE TREATMENT OF PROLAPSE
OF THE UTERUS AND VAGINA.

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THE operative treatment of prolapse of the uterus and vagina is a subject which has always excited much interest among gynæcologists. From the time that Marshall Hall introduced surgical treatment for severe forms of procidentia until quite recently, the discussion has been concerned chiefly with the various means of contracting the vagina and strengthening the perineum by plastic operations. Within the last few years the increased familiarity with abdominal section, and the improved technique of vaginal section, has led many operators to attempt to cure prolapse by fixation operations on the uterus. The result of this is that the surgical methods which are recommended, and have been tried in cases of prolapse, form quite a long list. We may enumerate the methods which have been most freely employed as follows:

(1) Plastic operations on the vagina and perineum; (2) vaginal fixation; (3) vaginal shortening of the round ligaments; (4) Alexander's operation; (5) ventrofixation; (6) the operations of Freund and Wertheim; (7) total extirpation of the uterus.

Each of these operations is further subdivided by its various modifications, so that the resulting literature on the subject is voluminous and somewhat confusing.

An attempt has been made by various writers to establish the relative worth of these operations by the publication of lists of cases in which special attention is directed to the local conditions which have been found after a considerable time has elapsed since the operation. The value of these statistical inquiries may seem open to doubt, and in some of the papers there is a good deal of skilful manipulation of figures; but a careful analysis of the results helps to give one a more exact knowledge of the utility of the various methods of surgical treatment than would otherwise be at our disposal.

1. *Plastic operations on the vagina and perineum.* — The most important paper of recent years on the technique of plastic operations for prolapse is one by Sanger¹ which appeared in the *Cent. fur Gynak.* of 1898. He holds that the fundamental point for the success of operations for prolapse still lies in plastic methods. He believes with Hegar that the insufficiency of the mechanism for closing the genital canal plays a greater part in the etiology of prolapse than the primary insufficiency of the peritoneal attachments. He points out that much depends on the individual operator, and that to perform plastic operations is still an art that many surgeons, who are otherwise skilful, do not practise. He lays stress on the great importance of preparatory treatment by rest in bed, replacement of the prolapse, douching, etc., and calls attention to the astonishing changes which occur in the most pronounced form of prolapse after this treatment. He then gives an account of the method which he adopts in operating. His first step, as a rule, is the preliminary high amputation of the cervix. When this has been done, and is followed by the vaginal plastic operation, the os uteri lies high up. At a later stage the cicatricial contractions which occur between the cervix and vaginal walls produce a sort of internal fixation of the uterus. The next step is to produce a raw surface on the anterior vaginal wall, and to bring its edges together by sutures. The same thing is done on the posterior vaginal wall, and the perineum is then brought forward and strengthened by a plastic operation on its vaginal aspect. The method of obtaining the raw surface on both anterior and posterior vaginal walls consists in making a mesial longitudinal incision, and raising two side-flaps by dissecting outwards from this mesial incision. No speculum is used, but the incision and separation of the flaps is facilitated on the posterior wall by catching hold of the mucous membrane with pressure forceps placed step by step from below upwards. In this way the raw surface may be carried right up to the posterior fornix. The bladder and rectum are restored to their proper positions by stitches in the connective tissue. In all cases, both for slight prolapse as well as the more severe forms, a thorough colpoperineorrhaphy must always be performed after the completion of the anterior colporrhaphy. The omission of this precaution is often alone to be blamed for the recurrence of a cystocele.

Sanger is not in a position to give the ultimate results of his operation in figures and percentages, but he affirms confidently that he has seen very few cases of recurrence in the large number of prolapse operations which he has performed, and that in no case was

the recurrence as well marked as the original trouble. The majority of so-called recurrences are cases in which either the operation or the healing has been imperfect.

Sänger's method of operating does not differ in essential particulars (except, perhaps, in the preliminary high amputation of the cervix) from the methods which were previously practised by Simon, Hegar, and Bischoff. The vaginal plastic operation has also been frequently performed in France and in America. Le Fort's method, which consists in denuding both vaginal walls in the middle line and uniting the two raw surfaces, has been popular in France. This operation is similar to that performed by Neugebauer in Germany.

In America Marion Sims appears to have been the first to practise anterior colporrhaphy as a routine treatment, and was followed by Emmett and numerous other operators.

In Great Britain plastic operations on the vagina are no doubt frequently performed, but comparatively little information is to be found concerning them in British medical literature. This is the more surprising when we consider that the first anterior colporrhaphy was performed by Marshall Hall, and that good work in plastic operations was done forty or fifty years ago by Baker Brown.

If we return now to recent German literature on the subject of the permanent results of vaginal operation, we may notice the statistics of v. Herff,² which are drawn from the results in the Halle clinic. Out of 283 cases, he was able to follow up 252, or 93 per cent. The operations performed for prolapse were anterior colporrhaphy and colpoperineorrhaphy. Often, in addition, amputation of the cervix and vaginal or vesical fixation were performed. A relative cure was observed after the purely plastic operation in 77 per cent.

Theilhaber³ reports that he has operated by plastic methods on twenty-four patients with well-marked prolapse. Of these he was able to follow up fourteen, and on examining them at a later date he found that thirteen were completely cured and free from trouble; in one case the vaginal portion of the cervix was strongly hypertrophied and presented at the vulva. Of the other ten patients, five wrote to say that they were quite well. Theilhaber's views and methods differ considerably from those of other operators. He believes that a sharp division should be drawn between prolapse of the uterus and prolapse of the vagina. As a rule, the serious prolapses are those of the anterior vaginal wall, with secondary elongation of the cervix. Primary pro-

lapse of the posterior vaginal wall rarely attains a large size, and primary prolapse of the uterus is very rare. The vaginal walls are only fixed by the connective tissue beneath them, and vaginal prolapse occurs as the result of atrophy of this tissue. Tears of the recto-vaginal septum have no real significance for the occurrence of prolapse of the anterior vaginal wall. It follows, therefore, that in operations for prolapse of the anterior vaginal wall the strengthening of the recto-vaginal septum is not necessary. On the other hand, the anterior colporrhaphy should be performed in the most complete manner. The whole of the prolapsed mucous membrane of the anterior vaginal wall should be excised.

Andersch⁴ gives the later results from Pfannenstiel's clinic in Breslau, with an analysis of 344 cases. The operative treatment was not limited to the vaginal plastic method, but eighty-three cases are given in which it was alone employed. Of these eighty-three cases, sixty were examined at a later date. The physical conditions were found to be good in fifty, there was slight prolapse of the vagina in seven, and well-marked prolapse in three (83 per cent. 'absolute' and 95 per cent. 'relative' cure).

In passing to the other operations for prolapse, we may note that none of them are complete in themselves, but are invariably recommended by operators of large experience to be used in conjunction with plastic operations on the vagina. Many operators hoped by means of a fixation operation (vaginal fixation, ventrofixation, and Alexander's operation) to be able to dispense with colporrhaphy, but these anticipations were not realized, and nearly all employ the combination of the two methods. The operations of Freund and Wertheim necessitate a raw surface being made, either upon the anterior or posterior vaginal wall, or on both (Fritsch); and advocates of total extirpation of the uterus in cases of prolapse admit that an essential point in the success of the operation is that it should be combined with a plastic operation on the vagina.

2. *Vaginal fixation*.^{*}—Some of the various fixation operations for prolapse may have been originally undertaken with the idea of supporting the uterus only from above, but experience soon showed—as, indeed, might have been expected—that the adhesions produced by Alexander's operation or by ventrofixation were not in themselves strong enough to bear the weight thrown upon them in cases of extreme prolapse. But the object of any vaginal fixation could hardly be to obtain a direct pulling up of the uterus, since that organ was fixed by the operation to structures (vaginal wall or peritoneum of utero-vesical pouch) which were specially liable to be

involved in the prolapse. Many surgeons, therefore, who practise this operation explain the success which they claim has followed it, on the ground that the uterus is less apt to become prolapsed when it is fixed in a position of anteversion. They insist that retroversion is the first stage of prolapse, and that if a plastic operation is performed on the vagina, and the uterus is left in a retroverted position, it acts as a wedge in the axis of the narrow vagina, and in this way tends to stretch the cicatrices. On the other hand, when the uterus is anteverted, it forms a more acute angle with the vagina, and the intraperitoneal pressure pushes it down in such a way that the strain is not so much upon the levator ani and perineum as on the ligaments of the uterus (Hohl, Christiani). Those who hold these opinions believe that by preliminary fixation of the uterus in a position of anteversion the results of the vaginal plastic operation are improved. It will be seen that the view here stated differs from that which has been generally accepted: retroversion of the uterus is regarded as a cause rather than as a result of prolapse.

Hohl⁵ gives the results of sixty vaginal fixations of the uterus from the Halle clinic. Of these operations, forty-three were undertaken for prolapse in various degrees, and thirty-nine patients were examined at a later date. Slight sinking of the vaginal wall was found in five cases, and complete recurrence of the prolapse in four cases. He believes that after longer observation scarcely 80 per cent. of relative or absolute cure would be found. He concludes that vaginal fixation combined with the vaginal plastic operation is sufficient for the cure of the less pronounced cases of prolapse accompanied by retroversion, but advises that in the more severe forms of prolapse ventrofixation should take the place of vaginal fixation.

Kauffmann⁶ communicates the results in fifty-one cases which were followed up out of 103 operations in the University clinic of Berlin. He does not make a very clear distinction between operations undertaken for simple retroversion and those undertaken for prolapse, but he concludes that the results convey the lesson that for marked prolapse, and total prolapse vaginal fixation is not suited.

Schmit⁷ reports the results from Schauta's clinic as twenty-two cases with five failures (22 per cent.).

Andersch is a staunch advocate of vaginal fixation, and recommends it for all cases of prolapse where pessary treatment is not possible. He tabulates eighty-seven cases which were examined at considerable intervals after operation. Prolapse of the uterus was

found in two of these, in three others there was prolapse, and in four slight sinking of the anterior or posterior vaginal wall (89 per cent. 'absolute' cure, 94 per cent. 'relative' cure). These results, it will be noted, are only slightly better than the results of the vaginal plastic operation alone which Andersch reports from the same clinic (83 per cent. 'absolute' cure, 95 per cent. 'relative' cure).

I have not thought it of sufficient importance to discriminate between cases which were operated on by the original method of vaginal fixation (fixation of the uterus to the vaginal wall and cellular tissue) and those in which the later modifications of seroso-serous fixation (Dührssen) or vesico-fixation (Mackenrodt) have been followed. The modifications were introduced in the hope of preventing the serious complications of pregnancy and labour which sometimes resulted from vaginal fixation, but they are not of importance in connection with the present subject. The complications of labour which are produced by operations for prolapse will be considered further on.

3. *Shortening of the round ligaments through the vagina.*—This operation was an outcome of vaginal fixation, and was introduced in the hope that it would be equally effective in the cure of retro-displacements of the uterus, and at the same time would be safer from the point of view of future pregnancy. Two methods have been adopted. In the one the round ligaments are stitched into the wound in the anterior fornix of the vagina; in the other they are pulled down into the vagina and shortened by folding and stitching. The operation is one which we would hardly expect to prove very useful, and, as a matter of experience, the results have not been good.

Halban⁸ gives as the results from Schauta's clinic at Vienna twelve cases, with six ultimate failures.

Bucura⁹ reports eighty-six of these operations performed by Wertheim for retroversion. In 21 per cent. of the cases the uterus fell back after a longer or a shorter interval.

Andersch reports twenty-nine cases, with fourteen ultimate failures. The operation does not seem to have been practised much, except by Schauta, Wertheim, and Pfannenstiel.

4. *The Alexander-Adams Operation.*—By this operation, as well as by ventrofixation, there is provided a distinct support from above; and it is, therefore, not surprising that these operations have been frequently combined with the vaginal plastic operation in extreme cases of prolapse.

The most recent communication on this subject is by Krönig and

Feuchtwanger,¹⁰ who give the later results from Zweifel's clinic in Leipsic. In every case in which the operation was performed for prolapse it was combined with a plastic operation on the vagina. The results in forty-two cases which could be followed up were as follows: in fourteen cases there was no descent of the vagina, but the uterus in two cases was retroverted, in one case it had descended slightly; in twenty-eight cases there was some prolapse of the vagina; in four of these the uterus was retroverted, and in four cases prolapsed, but anteflexed. In other words, retroversion was found in six cases, prolapse of the uterus in five cases, and prolapse of the vagina in twenty-eight cases.

Städler¹¹ reports cases operated on by Gelpke, who combines the Alexander-Adams operation with Lawson Tait's operation on the perineum. He gives a list of twenty-five cases, with six failures, but the after-history is based chiefly on communications from the patients.

5. *Ventrofixation*. — Christiani¹² communicates the results of Küstner's operations in the Breslau clinic. He claims that Küstner is the only one who, since his first ventrofixation for prolapse, has systematically practised the combination of ventrofixation and colporrhaphy. The two operations are performed at a sitting, and stress is laid on free splitting and careful stitching of the recto-vaginal septum.

Ventrofixation was performed in 134 cases. In twenty of these (two of total and eighteen of partial prolapse) no further operation was performed. In the remaining cases a vaginal plastic operation was also performed. The author was successful in obtaining information as to the later results in 105 cases (sixty-five were examined by himself or by other medical men, and forty patients replied to his inquiries by letter). In nine cases (8 per cent.) partial or total prolapse of the uterus was found on examination, or was inferred from the information supplied, and in twenty-four (22 per cent.) there was partial or total prolapse of the vagina. In twelve cases a ventral hernia occurred from stretching of the abdominal scar.

The author regards the position of the uterus after operation as much more important than the final result as regards the vaginal walls. In support of this opinion he states that the results of the operation, as estimated by the freedom of the patient from discomfort, are 82 per cent. of cures. He thinks that the reason why ventrofixation is not more popular in the treatment of prolapse is to be found in the failures which have followed the operation when performed alone. In his own cases failure occurred in 63 per cent.

when ventrofixation was performed alone or in combination with simple anterior colporrhaphy or amputation of the cervix, as against 20 per cent. of partial or complete failures resulting from ventrofixation combined with a thorough plastic vaginal operation. Even in cases of prolapse in nulliparous subjects simple ventrofixation is not suitable.

Boije¹³ reports twenty-nine cases of ventrofixation and colporrhaphy from Engström's clinic, with three failures and six comparative failures.

Terrier¹⁴ does not believe that vaginal and perineal operations are sufficient for the cure of prolapse, and practises ventrofixation in addition. He prefers ventrofixation to shortening of the round ligaments, as it renders practicable a thorough investigation of the pelvic organs. He performs ventrofixation first, and then waits for an interval of at least three weeks before he narrows the vagina. By that time, in many cases, a considerable diminution will be found in the size of the uterus, and especially in the supravaginal portion of the cervix when that has been elongated. For this reason he does not consider it necessary to amputate the cervix in every case. He reports four cases of the combined operation. In two of them the result was excellent after an interval of nine and five months respectively; the other two had only recently been discharged from the hospital.

It will be seen that Terrier meets an objection to ventrofixation that is often made, namely, that in cases where there is hypertrophy of the supravaginal cervix fixation of the body of the uterus to the abdominal wall will not pull up the lower part of the cervix.

Before passing to the consideration of the other operations, which are of an entirely different type from those we have been discussing, it will, perhaps, be well to notice recent contributions as to the frequency with which complications of labour occur as the result of the various fixation operations.

The subject is hardly mentioned in connection with *colporrhaphy*, and, as a great many of these operations are performed every year, we may take it for granted that the narrowing of the vagina does not influence the course of labour, except, perhaps, by causing some delay. It is true that the occurrence of labour after such an operation is the most frequent cause of the reappearance of prolapse. The parts are widely stretched by the passage of the child, but serious rupture seems hardly ever to occur, and, as a general rule, the state of affairs after the confinement is better than it was before the operation.

The influence of *vaginal fixation* in subsequent labours has given rise to much discussion, but the consensus of opinion is that, when the operation is performed in the way in which it was first introduced, the course of labour is often complicated, and in some cases very serious difficulties may be caused. The results, as regards pregnancy and labour, of the more recent methods (seroso-serous fixation, vesico - fixation, and low fixation) are not sufficiently numerous to enable us to form an opinion.

Dührssen¹⁵ gives the results in twenty confinements following the seroso-serous operation. In only two of these was medical assistance required (one perforation on account of rigid cervix, one low forceps for inertia).

Andersch reports four confinements after the seroso-fibrous operation, all of which were normal, and two confinements after the seroso-serous operation, of which one was normal and the other required forceps on account of inertia. One patient miscarried, and three others were pregnant at the time of his communication.

Hohl states that in seven confinements which occurred after vaginal fixation there was no serious difficulty which could be ascribed to the operation, but version was performed in three of these cases. Kauffmann observed five pregnancies after the operation, one of which terminated in abortion. Of the four cases that went to full time, three were normal, and in one there was a transverse presentation and version was performed. He mentions that another case, in which vaginal fixation had been performed elsewhere, was admitted to Olshausen's clinic on account of a serious complication of labour, and that Cæsarean section was necessary. Rieck¹⁶ reports thirty cases of pregnancy from a series of 1,000 vaginal fixations performed by Martin. Labour was complicated in five cases out of twenty which followed the old method of vaginal fixation (one Cæsarean section, one version on account of extreme stretching of the anterior lip of the cervix, one double incision of the posterior lip of the cervix and then forceps, one version for transverse presentation, and one version for cause not stated). In cases operated on by Martin's later method (fixation of uterus just above internal os) ten confinements occurred without complication. Rühl¹⁷ has collected seventy-one cases of labour after vaginal fixation. In forty-nine labours following the older methods, three were seriously complicated, and required incisions in the anterior lip of the cervix and in the vagina. He analyzes the nine cases of Cæsarean section recorded after vaginal fixation, and thinks that only two of them can be fairly attributed to the operation.

Kleinwächter¹⁸ gives a much more gloomy account of labours following vaginal fixation, from a consideration of 111 cases. Abortion occurred in 25 per cent., and labour was complicated in 32 per cent. of the eighty-three cases that went to term (nine forceps, seven Cæsarean sections, one deep incision of cervix).

There is not sufficient material at hand to help us in forming an opinion as to the effect upon pregnancy and labour of the operation of *shortening the round ligaments per vaginam*, but we may assume that from this point of view it resembles Alexander's operation. Experience shows that Alexander's operation has no ill effect on subsequent pregnancy or labour. Krönig and Feuchtwanger report eleven pregnancies and one abortion. The confinements at term were all normal. During pregnancy pain in the inguinal regions was sometimes complained of. Kleinwächter noted abortion eleven times in 112 cases, and states that the frequency of complications was not greater than under normal circumstances. Grusdew,¹⁹ from an experience of thirty-one cases, holds the same opinion.

The results of *ventrofixation* in subsequent pregnancy and labour are now generally regarded as being on the whole favourable, but this opinion is not supported by the statistics furnished by Dorland,²⁰ who shows that abortion occurred in about 14 per cent. and serious trouble during labour in 12 per cent. (twenty-two complicated cases in 175 confinements). Nevertheless he believes that ventrofixation is the best method of fixation, both from the obstetric and the gynæcological point of view. Slight technical mistakes in the operation may lead to serious complications during labour. The dangers increase with the low fixation of the fundus uteri. According to Norris²¹, who reports two cases of seriously complicated labour after ventrofixation, the maternal mortality in confinements complicated by previous fixation operations was 14 per cent., and the foetal mortality 58 per cent. Christiani believes that complications are entirely due to faulty methods of operating, and condemns the fixation of the uterus to the fascia of the abdominal wall, as practised by Engström.

On sifting the evidence before us, as to the effect of prolapse operations on subsequent pregnancy and labour, we are led to the following conclusions: that colporrhaphy, perineorrhaphy and shortening of the round ligaments are all safe procedures; that the older methods of vaginal fixation and ventrofixation are highly dangerous; that by the newer methods of fixation the risks are largely eliminated; and that ventrofixation is safer than vaginal fixation.

We have now to consider two operations for prolapse the principle of which differs widely from those we have just dealt with. Freund's operation and the total extirpation of the prolapsed uterus make no attempt to restore the displaced parts to their original position; in the one case the uterus is dislocated so as to act as a resistant body to the forces which caused the prolapse, and in the other case it is removed altogether. These operations can only be contemplated for cases in which the patient has passed the climacteric, and in which a pessary cannot be used and plastic operations are insufficient. For this class of case they may be said to compete with each other.

6. *The Freund-Wertheim operation.*—The operations of Freund²² and Wertheim²³ have the same object, but the methods differ. In the former the posterior fornix is opened and the fundus uteri pulled through the opening into the vagina. The anterior uterine wall (which now lies posteriorly) is then stitched to a raw surface on the posterior vaginal wall. Wertheim opens the anterior vaginal fornix, pulls the uterus down, and stitches its posterior wall to the anterior vaginal wall. Fritsch's²⁴ operation is the same as Wertheim's, with the addition that he stitches the anterior uterine wall to the posterior vaginal wall.

Comparatively few of these operations are recorded. Wertheim reports two cases with good immediate results, and at a later date sixteen cases from his clinic are reported by Bucura,²⁵ who states that recurrence of the prolapse occurred in only one case. Fritsch reports only one case, and makes no reference to the later result. Schauta has operated on six cases in a similar manner to Wertheim, and it is claimed that the results have been excellent (Schmit). Seven cases are reported by Mandelstamm.²⁶ Assaky²⁷ believes that the results of Freund's operation depend on the length of time that the sutures, which are left *in situ*, remain unabsorbed. He quotes Freund as saying that the operation is only suitable for slight prolapse in elderly women. Andersch mentions the case of a woman who presented herself at Pfannenstiel's clinic with a red swelling at the vulva. On examination this swelling proved to be the fundus of the uterus, and it was found that Wertheim's operation had been performed. The patient complained that the pressure of the uterus in the vagina caused her more trouble than the original prolapse.

On the whole, it cannot be said that this operation has aroused much enthusiasm, or has been followed by results which justify its existence as an operation for prolapse, even in old-standing cases in elderly women.

7. *Total extirpation of the uterus.*—The earliest case of removal of the uterus for prolapse to which a reference can be found is one by Toogood²⁸ in 1846, and a similar operation was performed by Choppin²⁹ in 1861. In those days, when plastic operations on the vagina and perineum were seldom practised, it was natural that some surgeons should be tempted to try radical measures in extreme cases of procidentia. But the operation was not seriously proposed until the technique of vaginal hysterectomy was simplified in the course of operations for cancer of the uterus. Since that time the operation has been frequently performed, but it has always been recognised as an exceptional procedure to be adopted only in cases of extreme prolapse in elderly women. Experience showed that it was not sufficient merely to remove the uterus, as that operation was frequently followed by prolapse of the vagina. It was therefore combined with a plastic operation on the vagina, or the stumps of the broad ligaments were stitched to the cut surface at the top of the vagina, or the cut surfaces of peritoneum were brought down and united to the vagina. Even with these precautions the results of the operation are not always as satisfactory as could be desired, and the present tendency seems to be to limit it more and more.

Fuchs³⁰ advocates total extirpation in combination with resection of the vagina and perineorrhaphy. He reports thirteen cases from the Breslau clinic. The permanent results could not be given on account of the short interval since the operations; the immediate results were good in eleven cases (84 per cent.), but in two prolapse of the anterior vaginal wall occurred.

Mangiagalli³¹ reports twenty-seven cases with one death, and states that the ultimate results have been good. He thinks that vaginal hysterectomy is sometimes indicated in cases of prolapse with complications, and even in rare cases of simple prolapse, but is of opinion that it should always be combined with plastic operations on the vagina.

Schlatter³² reports eight cases from the Bâle clinic, and has collected 178 other cases from various sources. The total mortality was 6.9 per cent., and in 132 cases which were followed up prolapse of the vagina occurred in five cases (3.78 per cent.). He gives the statistics of other writers as follows: Fehling with a mortality of 10 per cent. and recurrence in 7 per cent.; Zolotinsky with a mortality of 7 per cent. and recurrence in 11 per cent.; and Rauhut with a mortality of 8 per cent. and recurrence in 8.8 per cent.

Engström³³ has performed total extirpation combined with resection of the vagina in fifteen cases. All the cases recovered, but in

several prolapse of the vagina occurred at a later period. His indications are: total prolapse in elderly (and preferably unmarried) women who are in feeble health, as the operation is better borne in these cases than ventrofixation combined with colpoperineorrhaphy.

Froriep³⁴ reports six cases, of which five were examined at a later date. In four of these there was slight prolapse of the vaginal wall, which caused no discomfort.

More recently the operation has been rather adversely criticised. Säger thinks that to extirpate the uterus on account of prolapse exceeds the object for which the operation is undertaken, just as much as Porro's operation does when undertaken in place of Cæsarean section. In his view the uterus ought to be retained as part of the pelvic floor. v. Herff gives the ultimate results of vaginal hysterectomy for prolapse as 51·7 per cent. cured. Andersch reports twelve cases, of whom eight were examined at a later date; three of these had marked prolapse of the posterior wall, and the result was good in the other five. He remarks that there is a temptation to remove the whole of the uterus in the hope that part of the patient's suffering will thereby be relieved, but at the same time one must not forget that by so doing one removes the natural support of the vagina, and makes it impossible afterwards to utilize the uterus as a means of preventing prolapse of the vagina, and in consequence one is helpless in dealing with a cystocele, should this afterwards occur. Christiani states that the operation is reserved in the Breslau clinic for cases of irreducible prolapse. In his opinion, an operation which has at the present time a mortality of nearly 7 per cent. cannot compete with methods that show much better results without mutilating the patient.

It is difficult to arrive at general conclusions from the mass of opinions to which we have referred, but we may try to summarize the impressions with which we are left as follows:

The most generally useful operations in cases of prolapse are the plastic operations on the vagina and perineum, and by many operators they are regarded as sufficient in almost all cases. Some operators think that retroversion plays an important part in the causation of prolapse, and for that reason recommend anterior-fixation operations in combination with colporrhaphy. The later results of these combined operations are not much better—if at all—than those obtained by some operators by colporrhaphy alone. The old method of vaginal fixation is highly dangerous from the point of view of subsequent pregnancy, and should be abandoned. The newer

methods of vaginal fixation give fairly good results in cases of slight prolapse, but are not suitable for the more extreme cases; and sufficient evidence has not yet been forthcoming as to their effect on subsequent parturition. The success following the operation of shortening the round ligaments *per vaginam* has been very poor as compared with that obtained by other operations. Alexander's operation does not seem to have met with much success in cases of prolapse. Ventrofixation combined with colporrhaphy gives better results, but there is always the fear of trouble in future pregnancy, although the obstetric complications which have been reported were probably due to the method of fixation employed, as they seem to have been less frequent in the last few years. The operations of Freund and Wertheim have not been established as satisfactory measures even in the limited class of cases to which they were supposed to be applicable. Total extirpation of the uterus is an operation which should only be employed in very exceptional circumstances, such as cases of extreme and troublesome, or irreducible, prolapse in elderly women, the condition of whose tissues renders a plastic operation unsuitable; or cases in which there exists, in addition to the prolapse, some other indication for the operation.

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