RESULTS WITH THE WATKINS INTERPOSITION OPERATION IN THE TREATMENT OF PROLAPSUS UTERI

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THIS article has been written not for the purpose of bringing forward any new procedure in the treatment of prolapsus uteri, but with the intent of summing up the results obtained with a method which has now stood the test of more than a quarter of a century. With the advent of the Watkins interposition operation in 1898 (1) a new era began in the handling of these troublesome cases. Various modifications of this operation have been devised from time to time, some of which have proved advantageous in meeting certain special conditions, and have enhanced its value, but now, 28 years after Watkins' first publication on this subject, a vaginal interposition of the uterus, in its essentials the same as that first done by that pioneer, is still probably the best means of treating prolapsus uteri in women past the childbearing age.

With the idea of determining the final results obtained with this operation, the writer decided to make a thorough study of a series of cases. But one difficulty was apparent right at the start of this investigation. It is rare to find a single month in which one or more journals do not contain some proposed change in one or more of the steps of the original operation. Doubtless, some of these modifications are of real value, others are inconsequential, while others would render less efficient the procedure described in 1898. The net result of all this is that one seldom sees two operators do exactly the same "Watkins" operation. For this reason, it seemed better to study the end-results in a series of patients operated on by one man rather than a similar series in which several different surgeons had participated.

The series of 56 patients in the records of Dr. T. S. Cullen is of special interest, because the early ones were operated on as far back as 17 years ago and because Doctor Cullen has consistently performed the same operation on all. An article published in 1922 (2) contains an exact description of the operation carried out on these 56 patients. It is true that in his paper Doctor Cullen advocates the use of sutures as tractors in the vaginal operation for prolapsus, but this suggestion, though important, must not be regarded as a modification of the original Watkins operation, but only as supplying a method which facilitates the carrying out of one of its essential steps.

The average age of the patients in this series of cases was 54 years. Twelve women were over 60, seven over 65, and two over 75 years old. Only one patient was under 45 years of age. At the present time, of course, it is a well recognized rule that a vaginal fixation of the uterus should never be done on a woman in the childbearing age unless, at the same time, the patient is sterilized. In one instance only was this rule broken in this series of cases. The patient Mrs. V. C., aged 31, had a vaginal fixation of the uterus performed on her April 24, 1909, without simultaneous sterilization. In the last few weeks, we have heard from her that the operation was a complete success and that she has had no further trouble since. Fortunately, she has never become pregnant. Seventeen years ago the complications that developed as the result of a pregnancy occurring in a woman on whom a vaginal suspension of the uterus had been performed, were not appreciated so well as they are now.

The average number of children that these patients had had was four. None had borne more than ten, although several had had seven or eight. Several had had only one pregnancy. From a study of this series of cases, it seems probable that the damage incident to the first labor plays a more important rôle in causing prolapsus uteri than the number of pregnancies.

The symptoms complained of were the usual ones caused by procidentia-backache,

constipation, difficulty in voiding, and "falling of the womb." In all instances, there was, at least, a marked prolapse of the uterus present and in many the entire uterus lay outside of the vulva. Lacerations of the cervix, marked cystoceles and rectoceles were quite common. No cases of prolapsus uteri were considered extensive enough to contra-indicate this operation, our method of procedure differing from that carried out in certain clinics in which a vaginal fixation is performed in cases of marked cystocele only, whereas other operative procedures are preferred when the entire uterus lies outside of the vulva.

The operative procedure has so consistently been in its essentials that of the original Watkins operation that no details are here necessary. One operation, however, may be mentioned. Mrs. H. G. had a supravaginal hysterectomy performed in 1916 for fibroids. Six years later, she was found to have a marked dropping down of both the anterior and posterior walls of the vagina. Doctor Cullen was able to use the cervix just as one ordinarily uses the complete uterus in a Watkins operation and, by doing a vaginal fixation of the cervix, corrected both the marked cystocele and the prolapse of the cervix. An extensive posterior repair corrected the rectocele. It is now 4 years since the second operation and the patient has had no further trouble.

There were no operative deaths in this series of cases. Postoperative complications occurred in three instances, two patients having postoperative hæmorrhages and one developing a chronic cystitis. In the case of Mrs. F. S. the bleeding started 2 days after operation, while Mrs. F. J. had a severe hæmorrhage on the eleventh day. It was necessary to take these women to the operating room to control the bleeding which, in both instances, was due to the too rapid absorption of the catgut used in repairing the perineum. Both of these patients made a complete recovery and their symptoms were completely relieved. Mrs. E. B., unfortunately, developed a postoperative cystitis which became chronic and worried the patient for several months. As this is the only instance of this complication, it makes the frequency of postoperative cystitis following a Watkins vaginal fixation less than 2 per cent. This figure is probably as low as would be found to occur in a series following any of the major gynecological operations.

Questionnaires were sent to each of the 56 patients in which they were asked if their health had improved after the operation, if the symptoms of which they had complained were relieved, if they had had any further operative procedures performed after the Watkins operation, and if they had had any later trouble which might have been caused by the operation.

Of the 56 patients to whom questionnaires were sent, 48 have been heard from. Eight we were unable to trace, but of these five had been operated on over 12 years previously. One woman out of the 48 traced, later on had a second operation performed for procidentia. The history of this case is somewhat as follows: Mrs. G. D. was first operated on by Doctor Cullen in 1908 at the Johns Hopkins Hospital. At that time, she had a marked prolapse of the uterus with a cystocele and a rectocele. When the patient stood up the cervix protruded several centimeters outside of the vulva. Doctor Cullen performed the usual Watkins interposition operation. For 10 years after the operation the patient had absolutely no symptoms. In the eleventh year symptoms of procidentia returned and on examination a marked pocket in the anterior vaginal wall was found below the bladder. By performing an extensive cystocele operation, Doctor Cullen corrected the dropping of the anterior vaginal wall, and for 6 years the patient has had absolutely no symptoms. As the Watkins operation failed to cure the procidentia permanently and because a second operation was necessary, we have put this case down as a failure, but as the operation completely relieved the patient of all symptoms for a period of 10 years, the failure cannot be termed absolute.

One patient, Mrs. R. B., wrote that her health had improved since operation and that she had not been operated on again, but that the symptoms of which she had previously complained had been only partially relieved. Another patient, Mrs. A. H., was free from

Patient	Hospital	Date of operation	Follow-up results
1. V.C.	C.H.I.*	4-24-1909	Dec., 1925. Excellent.
2. J.T.	C.H.I.	4-26-1909	Not traced.
3. J.R.	C.H.I.	1-14-1913	Not traced.
4. F.E.	C.H.I.	5- 3-1913	Dec., 1925. Excellent.
5. M.G.	C.H.I.	5-28-1913	Examined 1922. Excellent.
6. F.B.	C.H.I.	10-14-1913	Not traced.
7. B.C.	C.H.I.	11-13-1913	Not traced.
8. C.D.	C.H.I.	12- 4-1913	Sept., 1925. Excellent.
9. J.F.C.	C.H.I.	1-11-1915	1920. Excellent.
10. C.W.	C.H.I.	1-23-1915	Not traced.
11. A.L.S.	C.H.I.	4-13-1915	Sept., 1925. Excellent.
12. E.T.	C.H.I.	6- 6-1916	Examined 1919. Excellent. Died from other conditions, 1920.
13. G.R.	C.H.I.	11-16-1916	Examined 1923. Excellent. Died from other conditions, 1924.
14. A.K.	C.H.I.	9-10-1917	Nov., 1925. Excellent.
15. G.H.D.	J.H.H.†	10- 1-1917	Sept., 1925. Excellent.
16. A.R.	C.H.I.	10-30-1917	Nov., 1925. Excellent.
17. J.H.	C.H.I.	11-16-1917	Sept., 1925. Excellent.
18. L.L.	C.H.I.	2-25-1918	Sept., 1925. Excellent.
19. I.R.	C.H.I.	3- 9-1919	Nov., 1925. Excellent.
20. I.R.	C.H.I.	4- 5-1918	Not traced.
21. E.B.	C.H.I.	4-16-1918	Sept., 1925. Improved but result not perfect.
22. M.D.	C.H.I.	5-22-1918	Nov., 1925. Excellent.
23. J.H. McC.	C.H.I.	6-18-1918	Sept., 1925. Excellent.
24. E.McC.	C.H.I.	7- 6-1918	Not traced.
25. A.H.	C.H.I.	7- 3-1918	Aug., 1925. Improved, but result not perfect.
26. A.M.	C.H.I.	11- 9-1919	Sept., 1925. Excellent.
27. C.K.	C.H.I.	12-10-1918	Sept., 1925. Excellent.
28. MacG.	C.H.I.	1- 8-1920	Sept., 1925. Operation a failure.
29. G.E.C.	C.H.I.	5-12-1919	Sept., 1925. Excellent.
30. W.P.	C.H.I.	3-21-1919	Aug., 1925. Excellent.
31. F.J.	C.H.I.	4- 8-1919	Sept., 1925. Excellent.
32. M.D.	C.H.I.	5-15-1919	Sept., 1925. Excellent.
33. L.H.G.	C.H.I.	6-13-1919	Sept., 1925. Free from symptoms due to prolapse.
34. E.C.	C.H.I.	1- 5-1920	Sept., 1925. Excellent.
35. F.H.	C.H.I.	1-17-1920	Examined 1922. Perfect.
36. J.G.E.	C.H.I.	1-20-1920	Sept., 1925. Excellent.
37. R.C.	C.H.I.	4- 3-1920	Sept., 1925. Excellent.
38. C.S.	C.H.I.	6- 9-1921	Sept., 1925. Excellent.
39. S.H.	C.H.I.	9-30-1921	Sept., 1925. Excellent.
40. E.L.	C.H.I.	10- 6-1921	Nov., 1925. Excellent.
41. J.H.S.	C.H.I.	11-14-1921	Sept., 1925. Perfect.
42. J.H. McA.	C.H.I.	1-13-1922	Aug., 1925. Excellent.
43. H.G.G.	J.H.H.	1-22-1922	Sept., 1925. Excellent.
44. M.F.C.	C.H.I.	6-11-1922	Nov., 1925. Excellent.
45. H.E.	C.H.I.	6-12-1922	Sept., 1925. Excellent.
46. H.H.	C.H.I.	7-13-1922	Not traced.
47. C.J.C.	C.H.I.	10-28-1922	Sept., 1925. Excellent.
48. R.B.	C.H.I.	10-31-1922	Heard from Sept., 1925. Condition improved by operation, but result not perfect.
49. E.M.	C.H.I.	11- 9-1922	Examined 1924. Excellent.
50. M.C.	C.H.I.	11-21-1922	Sept., 1925. Excellent.
51. J.T.S.	C.H.I.	3- 5-1924	Sept., 1925. Symptoms due to prolapsus uteri relieved.
52. J.S.	C.H.I.	11- 6-1924	Aug., 1925. Excellent.
53. F.S.S.	C.H.I.	11-24-1924	Examined Apr., 1925. Excellent.
54. C.D.	C.H.I.	12- 4-1924	Sept.,1925. Excellent.
55. L.K.	C.H.I.	2-10-1925	Dec., 1925. Excellent.
56. J.H.S.	C.H.I.	5-19-1925	Sept., 1925. Excellent.

*C.H.I., Church Home Infirmary.
†J.H.H., Johns Hopkins Hospital.

symptoms for 1 year after operation and on examination showed no evidence of procidentia, but she had developed a cystitis a year after operation and did not feel that her health was greatly improved by the operation. The results in these two cases we have put down as only partial successes, although on examination there was no evidence in either case that the operation had failed to accomplish what it was intended to do.

Forty-five out of the 48 women, or 93 per cent, made a complete recovery from their operation and were entirely relieved of all the symptoms of procidentia of which they had previously complained.

Many of these women, in addition to being heard from, were re-examined at varying periods after their operation. In no instance was there any descent of the uterus.

Sixteen of these patients were operated on during the last 5 years, twenty between 5 and 10 years ago, five between 10 and 15 years ago, and in one case 17 years have elapsed since the operation was performed.

There is no doubt that a vaginal fixation of the uterus is a procedure provocative of much less shock than any suspension which necessitates opening the abdominal cavity. The results of this study seem to justify the opinion that the writer felt before starting this work, namely that a vaginal fixation of the uterus is the operation of choice in treating prolapsus uteri in women beyond the child-bearing age not only because it causes less shock than other procedures, but because it yields such good results.

The favorable opinion which the writer held of the value of this operation before beginning this study was based on the uniform good results which he had obtained in the 12 cases in which he himself had performed this operation. He realized, however, that this number of cases was too small and too many of the patients had been operated on during the last few years for him to draw any conclusions from his own work. The advantages of using Doctor Cullen's private cases for this study are: (1) the large number of cases in the series, (2) the fact that the same operation has been consistently performed on these patients, and, finally, because in so many instances several years have elapsed since the operation was performed. I wish to thank Doctor Cullen for his permission to avail myself of his large experience with this operation.

In conclusion, this study has shown that 45 out of 48 patients on whom this operation was performed were completely relieved of all

symptoms of procidentia and had no return of the condition. Two patients were not completely relieved of all their symptoms, but on re-examination showed no evidence of procidentia. In one instance, the only known failure in the series, after 10 years the patient began to have further trouble and a cystocele developed.

It is doubtful if a study of a series of cases of prolapsus uteri treated by any of the other operative procedures would show any better end-results, and the fact that the Watkins interposition operation causes the least shock of any of the operations for the correction of this condition certainly should be emphasized.

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