

Trends in Hysterectomy for Genital Prolapse: Rural Experience

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Abstract: The present study was conducted to investigate the trends of vaginal hysterectomy for genital prolapse in last 20 years by analyzing case records of affected women.

During the analysis period, 4831 women underwent hysterectomy; records of 4223 (87.5%) were available. Of these, 911 (21.6%), 2.7% of 34,080 gynecological admissions, had vaginal hysterectomy for genital prolapse (study subjects).

Eighty percent women who had vaginal hysterectomy for genital prolapse were over 40 years of age; however, most of these women had had the disorder for years before they presented. Only 4 (0.4%) women had not given birth, 874 (96%) women had had two or more births, and 383 (42%) had had 5 or more births. Having given birth was the major factor responsible for genital prolapse. In all, 94.2% of women presented with something coming out of the vagina." Some women presented with abnormal vaginal bleeding or pain in abdomen as the chief complaint although they had had uterovaginal prolapse for years.

There was no mortality and morbidity decreased over the years. There has been no change in the rate of vaginal hysterectomy for genital prolapse over the years. Surgical morbidity decreased trend, possibly because of the preoperative, intraoperative, and postoperative precautions taken, especially preoperative treatment of urinary and genital tract infection.

Attempts need to be made to have safe births and a healthy life style so as to prevent genital prolapse and in case it occurs, therapy to prevent progression so that major interventions like hysterectomy are averted. Meticulous preoperative evaluation and planned therapy help in reducing surgical morbidity, if surgery becomes essential.

Keywords: genital prolapse, surgical morbidity, trends

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Introduction

Vaginal hysterectomy with repair (VHR) of the anterior and posterior vaginal wall is often required to provide functional and lasting relief to women who present with prolapse of the vagina, cervix, and uterus out of introitus, especially near or after menopause. According to studies by Wu et al¹ and Lubner et al,² it is predicted that over the next 40 years, the demand for services for such pelvic floor disorders will double from the present rate, in view of longevity of women. Significant pelvic structure weakening occurs after menopause due to deficient estrogen, which maintains pelvic tonicity. Olsen et al³ have also reported that the chance of a woman having genital prolapse increases with age; hence, the incidence of prolapse will rise as life expectancy increases. Ranee et al⁴ reported that the incidence of genital prolapse is difficult to determine, as many women do not seek medical advice. Beck et al⁵ reported that half of parous women lose pelvic floor support, resulting in some degree of prolapse, and of these women, only 10% to 20% seek medical care. Cardozo et al⁶ reported that in the United Kingdom, genital prolapse accounts for 20% of women on the waiting list for major gynaecological surgery. In the beginning, women may not have symptoms; however, as relaxation progresses, there is feeling of heaviness, pressure in the vagina, something (vagina, cervix, uterus) coming out of the introitus, and leakage of urine, which can worsen during heavy weight lifting, coughing, laughing, or sneezing. In addition, there may be symptoms related to urinary tract infection or sexual dysfunction.

Objectives

The present study was conducted to investigate trends in vaginal hysterectomy with anterior and posterior vaginal repair for genital prolapse and associated morbidity by analysis of case records of women who had surgery for this condition.

Methods

The present study was an analysis of case records of women who underwent vaginal hysterectomy for genital prolapse in the last 20 years. The cases were divided into four five-year blocks, A (1989–1993), B (1994–1998), C (1999–2003), and D (2004–2008). The study began at the end of 1998; hence, for retrospective cases, information from records from

previous years was collected and analyzed, and for the remainder, similar information was collected prospectively and analyzed. The study does not include all cases of genital prolapse that presented to the outpatient department or that were admitted. Since relaxation of the supports of the uterus with or without obvious genital prolapse continues to be a common problem, many women present with a feeling of something coming out of the vagina and do not return after active exercises have been recommended. Some women with vaginal cervical prolapse are not admitted for therapy. These cases have not been included in the study. The present study also does not include cases of vault prolapse, which occurs after vaginal hysterectomy for genital prolapse or nondescent vaginal hysterectomy for other benign disorders. We do not see vault prolapse after obstetric hysterectomy, which is not a common procedure because alternative modalities are used for postpartum haemorrhage and rupture of the uterus is uncommon now. Some women have genital prolapse when they are young and opt for conservative therapy. These women have also not been included. The present study is analysis of case records of vaginal hysterectomy with repair of genital prolapse.

Results

During the study period, 4831 women underwent hysterectomy. The records of 1818 of 2424 (75%) hysterectomies performed during the retrospective period could be obtained, and 100% of the 2407 records in the prospective period were obtained. Therefore, a total of 4225 case records were available for analysis, and, of these, 911 (21.6%) were of vaginal hysterectomy with repair of the anterior and posterior vaginal wall for genital prolapse (the study subjects). These cases represented 2.7% of 34,080 gynecological admissions during the period of analysis. In each time period, the following proportion of cases were vaginal hysterectomy with anterior and posterior vaginal wall repair for genital prolapse: 100 of 522 (19.1%) in block A, 701 of 167 (23.8%) in block B, 388 of 1211 (21.1%) in block C, and 388 of 1789 (21.68%) in block D. Over the study years, therefore, there was no change in the proportion of hysterectomies that were vaginal hysterectomies with vaginal wall repair for genital prolapse (Fig. 1).

In block A, 73/100 (73%) women were over 40 years of age, and 324/388 (83.5%) of women in

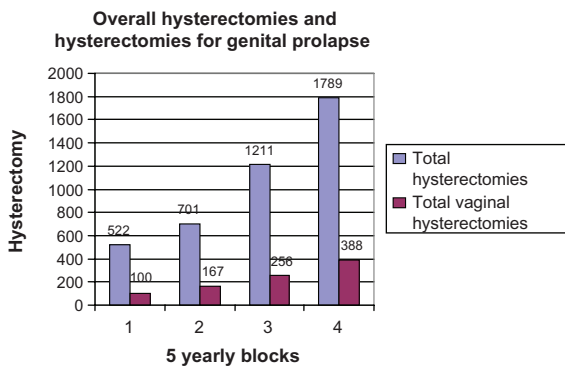


Figure 1. Numbers of hysterectomies by year.

block D were in this age group, that is, in the most recent group, a higher percentage of women were above 40 years of age ($P = 0.03$). Analysis of parity revealed fluctuations. In block A, x/x (10%) women had had two to four births, and in block D, x/x (38%) women had done so. The proportion of women who had had five or more births was 43/100 (43%) in block A, 68/167 (40.7%) in block B, 92/256 (36%) in block C, and 180/388 (46.4%) in block D. (Table 1). Overall, only 4/911 (0.4%) women had not given birth, 492/911 (54%) had two to four births, and 383/911 (42%) had five or more births.

Of the 911 women, 803 (88.1%) had third degree cervico-uterine prolapse (cervix outside the introitus),

Table 1. Vaginal hysterectomy with repair by age and parity.

Block	No. of hysterectomy	Age	Parity			Total	
			1	2-4	≥5	No	%
			No	No	No	No	%
A	522	20-39	1	20	6	27	2.9
		40-59	4+2*	24	28	58	6.4
		≥60	1*	5	9	15	1.6
Total			8	49	43	100	10.9
B	701	20-39	2	22	2	26	2.8
		40-59	4	54	47	105	11.5
		≥60	2	15	19	36	4.00
Total			8	91	68	167	18.3
C	1211	20-39	2	57	6	65	7.2
		40-59	4	75	62	141	15.4
		≥60	2+1*	23	24	50	5.4
Total			9	155	92	256	28.0
D	1789	20-39	3	55	6	64	7.1
		40-59	6	118	156	280	30.7
		≥60	2	24	18	44	4.8
Total			11	197	180	388	42.6
Grand total			36	492	383	911	100

Note: 4*No births.

84 (9.2%) had second degree (cervix up to introitus), and 24 (2.6%) had first-degree cervico-uterine prolapse (cervix inside the introitus) with varying degrees of vaginal prolapse, that is, vagina either remaining just inside the introitus or coming up into the introitus or outside of it. Of all 911 women, 94.2% had presented with something coming out of the vagina, but 5.8% presented with other symptoms as the chief complaint (4.7% abnormal uterine bleeding and 1.1% lower abdominal pain). Of the 911 women, 92 (10.1%) had other gynecological disorders in addition to genital prolapse. The percentage of women presenting with no other disorders was 86/100 (86%) in block A, 152/167 (91.10%) in block B, 222/256 (86.72%) in block C, and 358/388 (92.27%) in block D, again with no change over the years (Fig. 2).

Of the 911 study subjects, 818/911 (89.8%) had no intra-operative complications. The problem of intra-operative shock decreased from 1/100 (1%) in block A to nil in block D, and cardiac arrest decreased from 1/100 (1%) in block A to nil in block D. A decreasing trend was observed in all the postoperative complications: postoperative vaginal discharge decreased from 6/100 (6%) in block A to 9/388 (2.3%) in block D; urinary tract infection, from 5/100 (5%) to 2/388 (0.5%) in block D; and fever, from 1/100 (1%) in block A to 2/388 (0.5%) in block D. However, heavy vaginal bleeding occurred in 1/100 (1%) cases in block A and in 3/388 (0.8%) of cases in block D (Fig. 3).

Discussion

Uterovaginal prolapse is a common gynecological disorder, predominantly seen in middle and old age. Genital prolapse was found to be a common indication

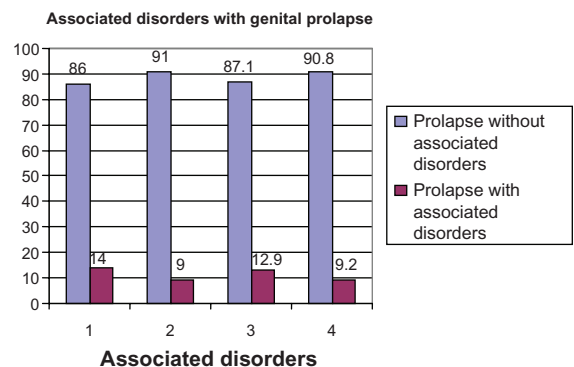


Figure 2. Disorders associated with genital prolapse.

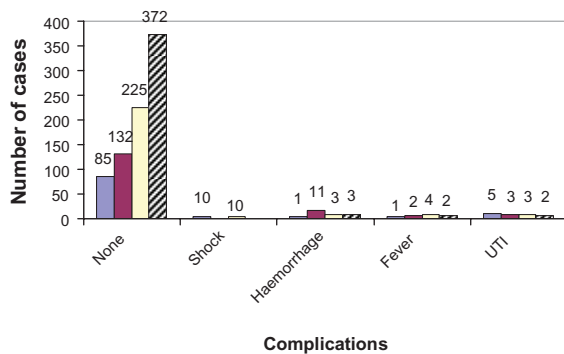


Figure 3. Complications during surgery.

for surgery with no change in trends over the years. Tinelli et al⁷ reported that even if the etiology of pelvic prolapse is poorly defined and multifactorial, risk factors associated with aging, such as biomechanical abnormalities in connective tissue composition, hormonal deficiency, and irregular tissue metabolism are nonmodifiable and, therefore, often seen in clinical practice. According to a study by Olsen et al,³ pelvic floor dysfunction is a major health issue for older women, indicated by the 11.1% lifetime risk of undergoing a single operation for pelvic organ prolapse and urinary incontinence, as well as by the large proportion of repeat operations. The initial damage to pelvic floor integrity generally occurs during childbirth and later with the climacteric, a second insult occurs. So if there are many births, there is more damage, and the climacteric effect adds to it, which often leads to prolapse of the vagina, cervix, and uterus. As is evident from the study by Romanzi et al⁸ lower urinary tract symptoms are common in women with genital prolapse. Voiding difficulty, bladder outlet obstruction, and occult stress incontinence may coexist, and they are associated with prolapse. In a study by Mehboob et al,⁹ of the 98 women who had vaginal hysterectomy with vaginal wall repair for genital prolapse, the majority had developed prolapse between 41 and 60 years of age. Jones et al¹⁰ also reported that weakening of the pelvic floor muscles and a decrease in pelvic connective tissue resilience due to menopause facilitate progression to symptomatic pelvic visceral prolapse.

In the present study, although 80% women were more than 40 years of age at diagnosis, many had had the disorder for years. Our institution is rural with 60% to 65% of patients living in a rural area. These rural women complete childbearing at a young age,

and the disorder actually starts at a young age and is aggravated near menopause, but the women continue to live with it. In the present analysis, no trends were found. In the study by Mehboob et al,⁹ there were no woman who had not given birth, 25.5% had had 3 to 5 births, and 75% had had 5 or more births, a major factor responsible for prolapse. However, in the present study, 4 (0.4%) women had not given birth, and 383 (42%) had had 5 or more births. Overall 874 (96%) women had had two or more births. The decrease in multiple births is a recent phenomenon; therefore multiple births as a cause of prolapse is likely to further decrease in the future.

In the study by Ugboma et al,¹¹ genital prolapse (118 cases) accounted for 11.8% of gynecological admissions (a very high proportion of genital prolapse), 70% study subjects were above 45 years of age, and 73% had had 5 or more births. Authors also report that the most common symptom was “something coming down the vagina” (95% of study subjects). In the present study, out of 34,080 gynecological admissions, 4831 (14.2%) had hysterectomy, 911 had hysterectomy for genital prolapse or 2.7% of all admissions (a high number), and 21.6% of women who had hysterectomies and 94.2% women who underwent vaginal hysterectomy with vaginal wall repair had presented with something coming out of the introitus; however, approximately 5% women had had genital prolapse for years but had presented with abnormal menstruation or pain.

In a study of surgical management of 200 cases of genital prolapse, Dutta et al¹² reported that 40% of their cases had third degree uterine prolapse, 42% had second-degree uterine prolapse, and 18% had first-degree uterine prolapse. In the present study, of the 911 women, 803 (88.1%) had third-degree uterine prolapse with varying degrees of vaginal prolapse, and only 2.6% had surgery for first-degree cervico uterine prolapse with varying degrees of anterior/posterior vaginal wall prolapse. In this area, rural women usually wait until their day-to-day life is affected. Furthermore, practice decisions regarding surgery are taken more often in cases of third-degree uterocervical prolapse, and the present analysis is only of cases where surgery was performed. Women with first-degree cervical descent are counseled and periodically reviewed. Also, sometimes the cervix might have only first-degree descent, but vaginal



wall prolapse is more than cervical descent and may be responsible for the symptomatology, and, in such cases, vaginal hysterectomy is the preferred mode of therapy. Pakbaz et al,¹³ also reported that vaginal hysterectomy is an efficient treatment for uterovaginal prolapse with swift recovery and a low rate of complication. Many women have urinary stress incontinence; therefore, efforts to disclose latent stress incontinence should be undertaken preoperatively. Overall, complications occurred in 14.7% of women: 15% in block A, 21.0% in block B, 10.6% in block C, and 4% in block D, a highly significant decrease in complications over the years, especially in block D (the rates of complications in all block are compared with rate of complication in block D) ($P < 0.001$). This is probably because of preoperative evaluation and therapy of lower genital tract infection and possibly better antibiotics and overall better care.

Conclusion

The issues related to prevention need to be looked into. Surgical morbidity can be reduced by proper preoperative, intraoperative and postoperative care. Preoperative meticulous evaluation and care are imperative. Treatment of urinary and genital infection and evaluation of biochemical and hematological parameters to prevent intraoperative and postoperative morbidity are essential. These could be the reasons for the decreasing morbidity trends observed in the present study. Pakbaz et al¹⁴ reported lack of information on pelvic organ prolapse in the public domain. With an aging population, pelvic floor disorders are likely to increase over the years. However, attempts need to be made to have safe birth and healthy lifestyles so as to prevent genital prolapse and, in case it occurs, to provide advocacy and therapy that prevents progression so that hysterectomy is averted, and if hysterectomy is needed, the aim should be to have the least morbidity.

Author Contributions

Conceived and designed the experiments: SC. Analyzed the data: MR, SM, NB, YY. Wrote the first draft of the manuscript: SC. Contributed to the writing of the manuscript: MR, SM, NB, YY. Agree with manuscript results and conclusions: SC, MR, SM, NB, YY. Jointly developed the structure and arguments for the paper: SC, MR, SM, NB, YY. Made critical revisions

and approved final version: SC. All authors reviewed and approved of the final manuscript.

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Competing Interests

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Disclosures and Ethics

As a requirement of publication author(s) have provided to the publisher signed confirmation of compliance with legal and ethical obligations including but not limited to the following: authorship and contributorship, conflicts of interest, privacy and confidentiality and (where applicable) protection of human and animal research subjects. The authors have read and confirmed their agreement with the ICMJE authorship and conflict of interest criteria. The authors have also confirmed that this article is unique and not under consideration or published in any other publication, and that they have permission from rights holders to reproduce any copyrighted material. Any disclosures are made in this section. The external blind peer reviewers report no conflicts of interest. Provenance: the authors were invited to submit this paper.

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