

# An Audit of Vaginal Hysterectomy and Pelvic Floor Repair for Uterovaginal Prolapse in South-East Nigeria

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## Abstract

**Aim:** The study aimed to audit vaginal hysterectomies and pelvic floor repair performed for women with uterovaginal prolapse as a quality assessment of the procedure. **Materials and Methods:** In this study conducted at the National Obstetric Fistula Center, Abakaliki, case folders of women who had vaginal hysterectomy and pelvic floor repair for uterovaginal prolapse between June 2012 and December 2016 were reviewed. Relevant data were extracted using a pro forma and analyzed using the Statistical Package for the Social Sciences, software version 21. **Results:** The case records of 358 women who had a vaginal hysterectomy and pelvic floor repair were reviewed. Their mean age and parity were  $53.44 \pm 10.54$  years and  $6.92 \pm 2.47$ , respectively. Complications were recorded in 49 (14%) of the patients, and these were intraoperative bleeding requiring blood transfusion in 15 (4.2%), postoperative intraabdominal bleeding requiring exploratory laparotomy in 7 (2%), urinary tract infection in 5 (1.4%), hospital re-admission following vaginal bleeding in 2 (0.6%), and vaginal discharge in 13 (3.6%). The long-term complication that was observed following the procedure was vault prolapse in 7 (2%). There was 1 (0.3%) mortality. **Conclusion:** Vaginal hysterectomy with pelvic floor repair is a relatively safe procedure in women with uterovaginal prolapse. There are morbidities associated with this procedure.

**Keywords:** Audit, pelvic floor repair, uterovaginal prolapse, vaginal hysterectomy, vault prolapse

## INTRODUCTION

As more adults continue to attain old age, the need to care for people with prolapse may increase since it tends to occur in women with increasing age.<sup>[1]</sup> Uterovaginal prolapse is often a source of worry. Vaginal hysterectomy and pelvic floor repair are one of the surgical procedures used in the treatment of uterovaginal prolapse, and the benefits over abdominal hysterectomy include rapid recovery, a quick return to normal activities, and fewer infection rate.<sup>[1,2]</sup> It also avoids an abdominal scar.

The route of hysterectomy depends on the surgeon's preference, indication for surgery, nature of the disease, and patient characteristics.<sup>[3]</sup> Indications for hysterectomy include symptomatic uterine fibroid, uterovaginal prolapse, dysfunctional uterine bleeding, adenomyosis, endometriosis, endometrial hyperplasia, benign and malignant ovarian tumors, postmenopausal bleeding of undetermined cause, and chronic pelvic inflammatory disease.<sup>[3]</sup> Uterovaginal prolapse appears to be the most common indication for vaginal hysterectomy.<sup>[4,5]</sup>

Despite these indications for hysterectomy, the desire for future fertility is a very important factor to consider before doing the procedure.

The complications of hysterectomy include bladder injury, bowel injury, ureteric injury, wound infection, and postoperative hemorrhage.<sup>[1,3]</sup> Hysterectomy may at times be associated with mortality.<sup>[6]</sup> Complications of vaginal hysterectomy include urinary stress incontinence, urinary tract infection, bacterial vaginosis, pain, fatigue, urethritis and constipation, intraabdominal bleeding, bleeding from suture site, vaginal vault abscess, urinary retention, ileus, thrombosis, pyrexia of undetermined cause, and intraoperative

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hemorrhage-necessitating blood transfusion.<sup>[1,4,5]</sup> Despite these complications, vaginal hysterectomy is relatively safe with minimal morbidity.

The contraindications to vaginal hysterectomy include carcinoma of the uterus, nulliparity, narrow vagina, narrow pubic arch, and immobile uterus.<sup>[7,8]</sup> In such disease conditions, abdominal hysterectomy may be the preferred choice. Experience of the surgeon and uterine size can also influence the route of hysterectomy.

The aim of this study was to conduct an audit of patients who had vaginal hysterectomy and pelvic floor repair for uterovaginal prolapse as a quality assessment of the procedure.

## MATERIALS AND METHODS

This was a retrospective study conducted at the National Obstetric Fistula Center, Abakaliki, South-East Nigeria, between June 2012 and December 2016. The center provides free surgical services to patients with genital fistula. There is also the provision for prolapse surgeries. The center is also designated as a research facility for urogenital fistula and is involved in other gynecological procedures. It has a bed-space capacity of 96, and the clients are mainly from the southern part of Nigeria and neighboring states.

The case folder of 358 out of 431 patients who had vaginal hysterectomy and pelvic floor repair during the study period were reviewed. Patients with incomplete records were excluded from the study. Those whose folders could not be retrieved were not reviewed. Vaginal hysterectomy was the preferred option for women who have completed their family size. During vaginal hysterectomy, some patients whose ovaries could easily be identified had them inspected.

The study was approved by the Ethics and Research Committee of the National Obstetric Fistula Center, Abakaliki. Data were extracted using a pro forma and analyzed using the statistical methods. The sociodemographic characteristics of the patients, operation note, complications, and follow-up data were reviewed. The patients were followed up to 6 months.

## RESULTS

The case records of 358 women who had a vaginal hysterectomy were reviewed. Their mean age was  $53.44 \pm 10.54$  years, and the mean parity was  $6.92 \pm 2.47$ . Their sociodemographic parameters are shown in Table 1. The mean duration of symptoms was  $4.3 \pm 8.8$  years. Sixty (19.5%) were premenopausal, whereas 298 (83.2%) were postmenopausal. The type of prolapse commonly observed was third-degree uterovaginal prolapse [Table 2]. The anesthesia of choice was spinal.

The overall morbidity was 14%. The complications observed were mainly intraoperative bleeding in 15 (4.2%) and abnormal vaginal discharge in 13 (3.6%), as shown in Table 3. Other adverse events recorded in the postoperative

**Table 1: Sociodemographic characteristics of the study population**

Variable	Frequency (%)
Age	
20-29	3 (8)
30-39	30 (8.4)
40-49	74 (20.7)
50-59	109 (30.4)
60-69	123 (34.4)
70-79	19 (5.3)
Parity	
Primipara	6 (1.7)
Multipara	55 (15.4)
Grandmultipara	297 (83)
Tribe	
Igbo	354 (98.9)
Others	4 (1.1)
Religion	
Christian	340 (95)
African traditional religion	18 (5)
Occupation	
Trading	31 (8.7)
Farming	312 (87.2)
Teaching	5 (1.4)
Artisan	4 (1.1)
Public servant	2 (0.6)
Housewives	4 (1.1)
Level of Education	
Primary	53 (14.8)
Secondary	9 (2.5)
Tertiary	3 (0.8)
No formal education	293 (81.8)
Marital Status	
Married	207 (57.8)
Single	2 (0.6)
Widow	148 (41.3)
Divorced	1 (0.3)

**Table 2: Degree of prolapse in patients**

Degree of prolapse	Frequency (%)
First degree	8 (2.2)
Second degree	123 (34.4)
Third degree	227 (63.4)

period were gastritis in 6 (1.7%) and malaria in 15 (4.2%). The long-term complication that was observed following vaginal hysterectomy was vault prolapse in 7 (2%). There was 1 (0.3%) mortality. Most patients were discharged between the postoperative day 5 and 7.

## DISCUSSION

In this study, vaginal hysterectomy was the treatment of choice for uterovaginal prolapse. Other studies have also shown that the most common indication for vaginal hysterectomy was uterovaginal prolapse.<sup>[4,5]</sup> Vaginal hysterectomy is the definitive

**Table 3: Complications associated with surgery**

Complication	Frequency (%)
Intraoperative bleeding	15 (4.2)
Intraabdominal bleeding	7 (2)
Urinary tract infection	5 (1.4)
Vault prolapse	7 (2)
Vaginal discharge	13 (3.6)
Readmission for vaginal bleeding	2 (0.6)
Mortality	1 (0.3)

treatment in uterovaginal prolapse. It has been associated with quick recovery, short length of hospital stay, and fewer infection rates compared to abdominal hysterectomy.<sup>[2,9-11]</sup> There is also no abdominal scar in vaginal hysterectomy. Surgical treatment of uterine prolapse may be open, laparoscopic, or vaginal approach, and there are other procedures that can preserve the uterus such as Manchester repair, sacrospinous hysteropexy, laparoscopic sacral hysteropexy, and laparoscopic uterosacral vault suspension.

The complication rate recorded in this study was 14%, of which about half were due to intraoperative bleeding and vaginal discharge. In other related studies, a similar complication rate has been documented.<sup>[4,12]</sup> In a study done in South Africa, a lower complication rate (5.6%) was recorded.<sup>[13]</sup> The complications following vaginal hysterectomy are lower than that of abdominal hysterectomy, hence should be encouraged when indicated.<sup>[3]</sup> Some authors have postulated that the fewer complication rates of vaginal hysterectomy may be because of its indications: Whereas vaginal hysterectomy is mainly for benign pathologies such as uterine prolapse, abdominal hysterectomies are done mainly for premalignant and malignant lesions.<sup>[3]</sup> The complications recorded in this study include intraoperative bleeding, intraabdominal bleeding, urinary tract infection, and vaginal discharge. In a study done in Jos, Nigeria, the most common complication recorded following vaginal hysterectomy was urinary retention, although this was not the case in the index study.<sup>[4]</sup> Long-term postoperative complications following the surgery for uterovaginal prolapse include stress incontinence, apareunia, dyspareunia, genital fistula, and vaginal stenosis.<sup>[14]</sup> These complications were, however, not found in the index study. The long-term complication recorded in this study was vault prolapse. In another related study, the complications observed following vaginal hysterectomy included accidental opening of the bladder, injury to the rectum, hemorrhage, sepsis, deep-vein thrombosis of leg veins, pelvic abscess, and peritonitis.<sup>[15]</sup> In a study done in Ibadan, Nigeria, the complication rate was 63%, and the most frequent problem was intraoperative hemorrhage.<sup>[16]</sup> A reason for this disparity may be because the record of intraoperative haemorrhage may at times be subjective. Febrile morbidity in 10.6% of the patients was the only complication recorded in another study.<sup>[5]</sup>

Vaginal hysterectomy may, at times, be associated with mortality, as seen in 1 (0.3%) of the patients in this study. This mortality is suspected to have occurred from anesthesia

as the patient did not recover from surgery. Other studies have recorded mortality rates of 0.117%–0.18% following vaginal hysterectomy.<sup>[7,15]</sup> This is not the case in some other studies where no mortality was recorded.<sup>[4,17]</sup> Proper surgical skills combined with good anesthesia may result in a low complication rate.

The main complication recorded after discharge was vaginal bleeding, which required hospital re-admission while the long-term complication recorded in this study was vault prolapse. Other authors have also described similar findings.<sup>[15,18,19]</sup> Women with vault prolapse had pelvic floor muscle training, and those who did not respond well to conservative management were then offered surgery (sacrospinous fixation).

This study did not include the histopathological analysis of specimens removed during vaginal hysterectomy. Authors hope that this will form the basis for future research.

## CONCLUSION

Uterovaginal prolapse can be treated with vaginal hysterectomy. There are few complications associated with this procedure, but mortality can occur. The major long-term complication of vaginal hysterectomy is vault prolapse.

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## Conflicts of interest

There are no conflicts of interest.

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