

Predisposing Factors, Clinical Presentation and Management of Utero-Vaginal Prolapse: Experience from a Teaching Hospital in Nigeria.

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ABSTRACT

Background: Although not a life threatening condition, utero-vaginal prolapse can have a detrimental effect on woman's quality of life by limiting physical, social, psychological and sexual functions. The objective of this study was to determine the prevalence, predisposing factors, mode of clinical presentation and treatment of utero-vaginal prolapse at the University of Ilorin Teaching Hospital, Ilorin.

Methods: A retrospective study of case records of patients with utero-vaginal prolapse at the University of Ilorin Teaching Hospital between 1st January 2000 and 31st December 2009 (ten years) were retrieved. Data extracted from the case records included age, parity, types of occupation and degree of genital prolapse among others. The data obtained were analyzed using SPSS software of the computer.

Results: Utero-vaginal prolapse constituted 8.5 per 1000 gynaecological cases and 30.5 per 1000 major gynaecological operations. Most (59.5%) of the patients studied and operated were grandmultiparous. The commonest identified predisposing factor in this study was high parity which constituted 66.9%. Physically exerting occupations (heavy weight lifting) was found in only 4.1% of patients. All patients (100%) presented with a mass protruding per vaginam and 70% had second degree prolapse. Most (97.5%) of patients had surgical treatment and vaginal hysterectomy was done commonly for the postmenopausal women and those that have completed their family size. There was no mortality; however post-operative morbidity included vaginal bleeding (4.1%), anaemia (2.4%) and infection (1.7%) among others.

Conclusion: Supervised hospital deliveries by trained personnel and utilization of family planning services in order to ensure low parity are recommended towards reduction in the incidence of utero-vaginal prolapse.

Key words: Utero-vaginal prolapse, grand multiparity, risk factors

INTRODUCTION

Utero-vaginal prolapse refers to the descent of the uterus with or without the vaginal wall from its normal anatomical position due to weakness in their supporting structures.^{1, 2} When the uterus prolapses, it carries along with it the vaginal wall but the vaginal wall can prolapse without the uterus.³ It is a common gynaecological problem.^{2, 3} The peak incidence is in the menopausal age group.^{1, 2, 3, 4} The general incidence varies widely among different populations. Like most other postmenopausal problems, it is generally under-reported because many patients do not present in hospital for treatment.^{3, 4} An incidence of 7.55 per 1000 had been reported from Ilorin, Nigeria.⁶ Generally, utero-vaginal prolapse accounts for up to 10-15% of hysterectomies.⁴ The incidence of utero-vaginal prolapse increases with age, parity and body mass index.^{2, 3} An incidence of 41% was reported from a study among menopausal women in a Jordanian population.³ However, an incidence of 5.5% was reported in Italy among women of similar age group but with low parity.⁷

Utero-vaginal prolapse arises as a result of a weakness of the ligamentous and muscular constituents of the pelvic floor supporting the uterus and vagina in their normal anatomical position.^{8, 9} Factors responsible for this may be racial, congenital, traumatic or hormonal.^{1, 7, 8, 9} Racial factors include the relatively poor connective tissue with less collagen in

ligaments as found in caucasian women. Also, there is decreased lumbar lordosis in white-women which allows the transmission of the intra-abdominal pressure directly to the pelvic floor leading to increased predisposition to prolapse.^{12, 10} Congenital factors include shortness of the vagina and a deep utero-vesical or utero-rectal pouch. Others are joint hypermobility, bladder extrophy, lumbosacral meningocele and a large transverse diameter of the pelvic inlet.^{1, 10} Traumatic causes include progressive neuromuscular damage from (often repeated unsupervised) vaginal deliveries,^{10, 11, 12} chronic rise in intra-abdominal pressure resulting from chronic cough and obstructive airway diseases, ascites, constipation, farming and occupations involving heavy weight lifting constitute sources of trauma to the supporting tissue of the pelvic floor.^{2, 7, 11, 13}

Hormonal causes are often related to the oestrogen deficiency associated with menopause.^{1, 13} The most outstanding factor seems to be vaginal childbirth since utero-vaginal prolapse is uncommon in the nulliparous and the incidence increases with parity.^{12, 13, 14, 15} Although utero vaginal prolapse is not a life threatening condition, it causes distressing chronic morbidity in the form of stress urinary incontinence, sexual and micturitional difficulties and problem with defaecation.⁷

This study assessed the prevalence, predisposing factors and management of utero-vaginal prolapse in University of Ilorin Teaching Hospital, Ilorin, Nigeria.

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MATERIALS AND METHODS

The study was a retrospective review of the cases managed in the University of Ilorin Teaching Hospital between January 1st 2000 and December 31st, 2009. The case records of the patients were retrieved from the department of medical records and analyzed. Data extracted from the case records included: age, parity, types of occupation, presenting complaint(s), identifiable predisposing factor(s), degree of genital prolapse and associated pelvic structure prolapse, treatment modalities, and post-treatment complications. The inclusion criteria were those women who complained of feeling of something or mass coming down their vagina and they had demonstrable descent of the uterus with or without associated vaginal wall descent. Excluded were those women who had other symptoms other than referable to utero-vaginal prolapse. The later groups included patient with complaints similar to utero-vaginal prolapse but with no demonstrable genital prolapse, those with varying degree of vaginal wall descent but with no uterine descent, those in whom grades and sites of prolapse could not be determined from case records and those with incomplete data. The gynaecological clinic attendance and operation registers were also reviewed to obtain the total number of patients, total major and minor gynaecological surgeries, and surgeries for utero-vaginal prolapse. Data were analyzed using the SPSS statistical package for Windows, version 10.0 (SPSS, Chicago, Illinois, USA). The results were aggregated and are presented as number and percentage.

RESULTS

During the period under review, a total of 14,862 gynaecological cases were managed of which 3,872 had major gynaecological operations and 126 cases were utero-vaginal prolapse. One hundred and twenty one records contained adequate information for analysis. One hundred and eighteen (118) patients received surgical treatment while 3 patients were managed conservatively. It can be inferred that utero-vaginal prolapse constituted 8.5/1000 gynaecological cases and 30.5/1000 of major gynaecological operations.

Table 1 shows the socio-demographic variable for utero-vaginal prolapse. There was no patient less than 20 years old. The age range of patients in the study was between 26 and 72 years. Seventy two (59.5%) were grandmultiparous, thirty one (25.6%) were para 3-4, sixteen (13.2%) were para 1-2 while only two (1.7%) were nulliparous. More than half (66) constituting 54.5% involved in petty trading not associated with heavy weight lifting. Twenty one (17.4%) patients were farmers, three (2.5%) patients were civil servants, seventeen (14.1%) patients were involved in physically exerting occupations (heavy weight lifting) and fourteen (11.5%) were full time housewives.

High parity is the commonest predisposing factors constituting 66.9% followed by difficult repeated vaginal deliveries found in 14 (11.6%) patients. In 5.8% of cases, the predisposing factor could not be identified (Table 2). All patients (100%) presented with a mass protruding per vaginam. Other clinical presentation includes low back ache (28.1%), stress incontinence (9.9%), vaginal discharge (4.1%), urinary frequency (3.3%), lower abdominal pain (2.5%) and difficult defecation (1.7%) (Table 3).

About two thirds of the patients 81 (67.0%) had second degree prolapse, 22.3% had procidentia while only 10.7% of

patients presented with first degree prolapse. About 84.1% of patients had anterior and/or posterior vaginal wall prolapse. The commonest associated vaginal wall prolapse is cystocele occurring in 68.6% of patients. Rectocele, enterocele and urethrocele occurred in 11.6%, 8.3% and 5.8% of patients respectively.

One hundred and eighteen (97.5%) of patients received surgical treatment while the remaining 3 (2.5%) were managed conservatively. One hundred and two (86.4%) had vaginal hysterectomy with pelvic floor repair and 13.6% had uterine conserving surgeries with 87.5% of them less than 40 years and 50% less than 30 years of age. The conservative management employed in 2.5% of the entire patients involved the use of vaginal pessaries, oestrogen creams and pelvic floor exercises.

Majority of the patients (106) constituting 87.4% were without significant complications following vaginal hysterectomy and there were no mortality. Five patients (4.1%) had vaginal bleeding which were minimal and 2.4% developed anaemia necessitating blood transfusion. Wound infection, urinary tract infection and vault haematoma occurred in 1.7% of patients.

DISCUSSION

Utero-vaginal prolapse constituted 8.5/1000 gynaecological cases managed in the ten year review period. This was similar to 7.55/1000 recorded in the same institution in the preceding decade.⁶ It also constituted 30.5/1000 of all major gynaecological operations which is lower than 53/1000 recorded in Nnewi.⁴ The lower incidence may be due to the fact that this institution has no restriction to patient admission and treatment therefore serving as both primary, secondary and tertiary health care centre. This will definitely cause a dilutional effect of patients and the proportion of operation recorded.

None of the patients in this study was under 20 years of age. This was similar to a study done in Ibadan.¹⁷ Generally, utero-vaginal prolapse is uncommon in the adolescent.^{15,18} Seventy-six percent of patients were perimenopausal which is similar to the findings from Ibadan with 79.34%¹⁷ but higher than 69.6% recorded at Nnewi⁴ and 61% from Port-Harcourt.¹¹ The findings from this study revealed that uterovaginal prolapse is commonest in grandmultiparous women. The parity distribution is similar to those of other studies in Nigeria.^{4,6,11} Trauma from vaginal delivery has been noted as a prime factor in the development of the disease.¹⁴ The first vaginal birth seems the critical factor while subsequent pregnancies and vaginal births, nature of the vaginal deliveries, ageing and hormonal effects of menopause play an aggravating role.¹⁴ However, utero-vaginal prolapse can occur in nulliparous^{6,18} as it occurred in two (1.7%) of the patients in this study. Uterine prolapse in the nulliparous occurs from causes other than spontaneous childbirth. A congenital weakness of the supporting elements of the pelvic floor aggravated by other factors such as increased intra-abdominal pressure, ageing or a neuronal disease.¹⁹ One of the prolapse occurring in the nulliparous was in a patient with chronic cough while the other had no identifiable risk factor. All the patients in this study presented with the feeling of something coming down the vagina. This is similar to the findings obtained in other studies conducted in Nigeria.^{4,6,11,17} This is generally the commonest

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presentation of utero-vaginal prolapse.¹³

More than two-thirds of patients (67%) had second degree prolapse in this study. This is similar to the findings in the previous studies in Ilorin, Port-Harcourt and Ibadan.^{6,11,17} However, findings in our environment are in contrast to the findings in a clinic study at Italy where 65.3% of the patients presented with first degree prolapse.⁷ This reflects the health seeking behaviour of the patients in our country (Nigeria) where late presentation to the hospital is common.^{20, 21} The commonest associated vaginal wall prolapse were cystocele accounting for 68.6% followed by rectocele occurring in 11.6% of patients. Others are enterocele and urethrocele occurring in 8.3% and 5.8% respectively. This is similar to the findings at Nnewi and Ibadan.^{4,17} Major degrees (second and third degrees) uterine prolapse are often associated with anterior or posterior vaginal wall prolapse of which cystocele is the commonest.^{1,2,15}

Most of the patients (97.5%) had surgical treatment while only 2.5% were managed conservatively. Surgical treatment offers a more lasting cure for prolapse while non-surgical treatment modalities are mainly temporary.^{22, 23} The type of surgery was determined by patient's age, parity and degree of prolapse. The greater proportion of patients (87.5%) under 40 years of age had Manchester repair compared with only one patient in the post-menopausal age group who had Manchester repair. In the previous study in Ilorin, Nigeria,⁶ 88.47% of patients less than 30 years of age had Manchester repair while 5% of menopausal women had Manchester repair. Similarly, in Nnewi, 92.6% of the patients under 40 years had Manchester repair.⁴

Highlighting the importance of age, Ugboma et al¹¹ reported that a 17 year old nulliparous patient had Manchester repair while a 52 year old counterpart had hysterectomy. The uterus is often conserved in the younger patients because they are more likely to be desirous of more children and maintenance of their monthly period. Both young age and desire for more children have been linked with higher incidence of post-hysterectomy psychological illness.²⁴

Vaginal hysterectomy may be indicated in young patients if there is a third degree prolapse, especially if they are of high parity, properly counselled and not desirous of further childbirth or if the utero-vaginal prolapse is complicated by uterine haemorrhage or disease.²⁵ The overall morbidity rate for the surgeries was 12.4%. This is in contrast to the 50.72% recorded in the previous study in the same center during the preceding decade when antibiotic prophylaxis were not routinely practiced.⁶ There were also poor nutritional status and pre-operative anaemia requiring blood transfusion.⁶ In the present study, antibiotics were commonly used as prophylactic or therapeutic doses depending on the choice of the Consultant Gynaecologist managing the patients. Also, good pre-operative preparations of the patients were ensured and co-existing medical conditions were co-managed with the Physician. Also, patients' nutritional status and haemogram were built up to normal before the surgeries. Additionally, all patients in the previous study had general anaesthesia while majority in this study were done under spinal anaesthesia.

The use of non-surgical treatment did not follow any particular pattern in this study. Two of the patients were counselled on conservative measure as a temporary treatment while they prepared for their operations probably

because of fear of surgery which is common in this environment.^{16, 26} Poverty could also have made them unable to afford the cost of surgical treatment.²⁷ None of the patient in this study had colpocleisis. This is similar to the findings in the previous study in Ilorin and Zaria.^{6, 28} Patent female reproductive tract is often regarded as synonymous to femininity in this environment.^{6, 29}

In conclusion, utero-vaginal prolapse can be reduced by education of the populace on use of antenatal and delivery services coupled with family planning in order to ensure low parity. There should be training and retraining of traditional birth attendants on early recognition of complicated pregnancies and labour for prompt referral. Pelvic floor physiotherapy in the puerperium should also be recommended for women at risk.

Table 1: Socio-demographic Variables for Utero-vaginal prolapse at Ilorin (n=121)

Age (years)	No. of patients	%
20-29	10	8.3
30-39	8	6.6
40-49	11	9.1
50-59	45	37.2
>60	47	38.8
Parity		
0	2	1.7
1-2	16	13.2
3-4	31	25.6
>5	72	59.5
Occupation		
Civil servants	3	2.5
Farming	21	17.4
Physically exerting (Heavy-Weight lifting occupations)	17	14.1
Trading (not involving Heavy weight lifting)	66	54.5
Unemployed (full-time House wives)	14	11.5
Total	121	100

Table 2: Identified Predisposing factors for utero-vaginal prolapsed

Predisposing factors	No. of patients	%
None	7	5.8
High parity (>5)	81	66.9
Difficult deliveries	14	11.6
Physically exerting (Heavy-Weight lifting occupations)	5	4.1
Chronic cough	2	1.7
Menopausal atrophy	8	6.6
Prolonged abdominal swelling	1	0.8
Prolonged constipation	1	0.8
Others	2	1.7
Total	121	100

Table 3: Clinical Presentation of utero-vaginal prolapse

Presentation	No. of patients	%
Mass coming down the Vagina.	121	100
Low backache	34	28.1
Stress incontinence	12	9.9
Vaginal discharge	5	4.1
Difficulty with micturition	2	1.7
Frequent micturition	4	3.3
Lower abdominal pain	3	2.5
Difficult defaecation	2	1.7

NB Some women had more than presenting Symptoms

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