ORIGINAL ARTICLE

Uterovaginal prolapse at a University Teaching Hospital in South-East Nigeria

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ABSTRACT

Background: Uterovaginal Prolapse is a common gynaecological problem particularly in the grandmultipara. It is of considerable importance to the practising gynaecologist in the tropics because of its strong association with repeated child birth and poor conduct of labour.
Objective: To determine the hospitalprevalence and management pattern of this condition in Imo State University Teaching Hospital, Orlu and the attendant problems associated with the management.
Methodology: This was a retrospective study of all patients presenting with uterovaginal prolapse between 1st January, 2004 and 31st December, 2007. There were 1,075 gynaecological admissions during the period and 43 patients had genital prolapse out of which 42 (97.7%) case notes were retrieved from the medical records department. Relevant data were obtained from the case notes, which included age, parity, presenting symptoms, number of living children, types of delivery, types of surgical management and associated operative morbidity and mortality. The data were presented as simple percentages.
Results: The prevalence of uterovaginal prolapse in this study was 39.1 per 1000 gynaecological admissions making it 3.9% of total gynaecological admissions. The mean age of presentation was 51.4± 3.3 years. The mean parity was 4.2± 1.6. Grandmultiparity accounted for 81% of the cases. The most common symptom at presentation was the sensation of a protrusion down the vagina in 32 (76.2%) of the patients. Difficult labour was found to be the most common associated factor in 32 (76.2%) of the patients. The most common form of treatment offered was vaginal hysterectomy with pelvic floor repair, 37 (88.1%).
Conclusion: There is need to educate women on the importance of accessing skilled antenatal, delivery and postnatal services as these might reduce the prevalence of uterovaginal prolapse in our environment.

Keywords: *Difficult labour, genital, hysterectomy, multiparity*

INTRODUCTION

Uterovaginal prolapse is a common gynaecological problem particularly in the grandmultipara.[1,2,3,4,5,6,7,8] It is of considerable importance to the practising gynaecologist in the developing and low income countries because of its strong association with repeated child bearing.[2,3,5,9,10,11] Poor conduct of labour, as in bearing down before full cervical dilation, prolonged traction from high forceps delivery, and downward pressure on the fundus during attempts to deliver the placenta (Crede's manoeuvre) are all obstetric factors which predispose to uterine prolapse.[4,12,13]

Uterovaginal prolapse is also common in conditions of chronically raised intra-abdominal pressure, which include chronic obstructive airway diseases, obesity, abdominal tumours, straining during defaecation and heavy physical exertion.[2,3,4,11] Very rarely, it could be due to congenital weakness of the pelvic floor muscles (as in spina bifida), joint hypermobility (as in connective tissue abnormalities), and altered collagen metabolism.[3,12,14] Female circumcision pattern, as practised by the Pokot tribe of Kenya can also predispose to genital prolapse following childbirth.[15]

The female genital organs are maintained in their normal anatomical position by a number of fascial condensations (endopelvic fascia) referred to as ***ligaments***, especially the transverse cervical (cardinal) and uterosacral ligaments.[2] Weakness in any of these supportive structures leads to uterine descent, particularly around the period of menopause when estrogen withdrawal causes a second insult to the integrity of the pelvic supports already weakened by repeated vaginal deliveries. Hence, childbirth and aging constitute the most important associated factors of female genital prolapse.[7,8,9,10,11]

Three degrees of uterovaginal prolapse are described and the level of the cervix (the lowest and dependent part) is assessed while the patient is straining. First degree prolapse is diagnosed when the descent is still within the vagina; second degree when it has descended to the introitus and third degree when it has descended outside the introitus. The third degree, termed procidentia, is usually accompanied by cystourethrocoele and rectocoele.

The definitive treatment of genital prolapse is surgery. The aim is to correct the prolapse, strengthen the genital support, maintain continence and preserve coital function. This can either be conservative or definitive. The definitive treatment is vaginal hysterectomy with pelvic floor repair. The conservative approach, as devised by Donald of Manchester in 1908, and later modified by Forthergil in 1922, entails anterior colporrhaphy, posterior colpoperineorrhaphy, amputation of the cervix and shortening of the cardinal (transverse cervical) ligament. This Manchester-Fothergill operation is indicated when the patient is desirous of retaining her reproductive capacity or in a situation where surgical access is poor and the uterine descent is minimal.[13,16,17] This operation is, however, associated with increased incidence of abortion and premature labour.[13,16]

Sacrohysteropexy, an abdominal procedure, involves the attachment of a synthetic mesh (teflon) from the uterocervical junction to the anterior longitudinal ligaments of the sacrum, thereby closing the pouch of Douglas.[1,3] Vaginal hysterectomy with pelvic floor repair remains the treatment of majority of patients with uterovaginal prolapse. [12,17,19,20] Palliative measures like the use of pessaries (ring or shelf) can also be used in the early months of pregnancy in patients with procidentia who are desirous of retaining their reproductive function, or in patients who wish to postpone surgery or who are not fit for surgical repair.[3,21]

This study was designed to determine the prevalence and management outcome of this condition in Imo State University Teaching Hospital, Orlu and also, the attendant morbidities associated with repair

procedures. No such study has been carried out in our centre previously.

METHODOLOGY

This is a retrospective study of all the patients with uterovaginal prolapse that presented in our centre between 1st January, 2004 and 31st December, 2007. There were 1,075 gynaecological admissions during the period and 43 patients had genital prolapse. Forty-two case notes were retrieved from the medical records department and data obtained from the case notes included age, parity, presenting symptoms, number of living children, mode of delivery, type of surgical management, operative morbidity and mortality. The data were presented as simple percentages and the Statistical Package for Social Sciences [SPSS] version 13 was used where appropriate.

RESULTS

The incidence of uterovaginal prolapse calculated from this study was 3.9% of total gynaecological admissions. Thirty-one patients (73.8%) had home deliveries while 11 (26.2%) had hospital confinement. The youngest patient was 18years old while the oldest was 70years. The mean age at presentation was 51.4 ± 4.2years, and 31% of the patients were in the reproductive age group. It also shows the influence of the number of children on the types of management offered the patients. All the patients who had 3 or more living children 37 (88.1%) had vaginal hysterectomy with pelvic floor repair, while those with less than 3 living children had Manchester repair. The 18-year old primigravida had a pessary, see Table1.

The parity distribution ranged from 0 to 7 with a mean of 4.2±1.6. Grandmultiparity accounted for 80.1% of the cases (Table 1). The most common presenting symptom was the sensation of a protrusion down the vagina 32 (76.2%). Urinary symptoms such as dysuria and stress incontinence occurred in 18 (42.9%) and 11 (26.2%) of the patients respectively while decubitus ulcer occurred in 14 (33.3%) of the patients, see Table 2.

Difficult labour was found to be the most common associated factor 32 (76.2%), while postmenopausal changes accounted for 25 (59.5%) of the cases (Table 3). The most common type of genital prolapse as seen in this review was the second degree, which accounted for 35 (83.3%) of the cases while third degree prolapse occurred in 5 (11.9%) of the patients as shown in Table 4.

Table 1. Socio-demographic characteristics and types of management employed

Parameter (N = 42)	Frequency	%	Type of Management Employed		
			Ring Pessary	Manchester Repair	Vaginal Hysterectomy + Floor Repair
Age					
<20	1	2.4	1	-	-
21-30	2	4.8	-	2	-
31-40	4	4.5	-	2	2
41-50	6	14.3	-	-	6
>50	20	69.1	-	-	29
Parity					
0	1	2.4	1	-	-
1	2	4.8	-	2	-
2-4	5	11.9	-	2	3
≥5	20	81.0	-	-	34

Vaginal hysterectomy with pelvic floor repair was the most common operation performed 37 (88.1%) while Manchester repair was carried out in 4 (9.52%) of the patients (Table 4). One patient with second degree prolapse had conservative management in the form of ring pessary. She was an 18-year old primigravida in her second trimester of pregnancy.

Table 2. Symptoms* of uterovaginal prolapse

Symptom	No. of patients n=42	%
Sensation of something coming down the vagina	32	76.2
Dysuria	18	42.9
Decubitus ulcer	14	33.3
Stress incontinence	11	26.2
Low back ache	11	26.2
Others	9	21.4

* Multiple symptoms in most cases

Table 3. Associated aetiological factors* in uterovaginal prolapse

Symptom	No. of Patients	%
Difficult labour	32	76.2
Postmenopausal	25	59.5
Farming	4	9.5
Chronic cough	3	7.1
Lifting heavy loads	1	2.4
Congenital weakness	1	2.4
Others	6	14.3

*Multiple factors in most cases

Table 4. Type of genital prolapse and management employed

Type	Ring Pessary	Man-chester Repair	Vaginal Hysterectomy + Pelvic Floor Repair	No. of Patients *n=42*
First Degree	-	-	2	2
Second Degree	1	4	30	35
Third Degree	-	-	5	5
TOTAL	1(2.3%)	4(9.52%)	37(88.0%)	42 (100)

DISCUSSION

The institutional prevalence of uterovaginal prolapse in this review is 39.1 per 1000 gynaecological patients. This prevalence is lower than that reported from Ibadan (45 per 1000 gynaecological admissions) but much higher than that reported from Lagos which is 0.74 per 1000 gynaecological patients, 7.6 per 1000 gynaecological admissions from Ilorin and 21 per 1000 gynaecological admissions in Nnewi and Enugu, South-East Nigeria.[10,22]

Variations in prevalence might be due to the differences in the populations studied, and the differing periods of the studies. Previously, people with uterovaginal prolapse rarely presented to the hospital, but nowadays, because of increased awareness patients present to the hospital, hence the increase in prevalence/number of cases. Also, Orlu being a semi-urban town has a large proportion of farmers and women who tend to deliver their babies outside hospital settings.

The age distribution in this study is similar to those reported from other centres in Nigeria and Kenya.[4,10,15] Eighty-three percent of the patients were >40years of age which is in agreement with the report from Ibadan, but higher than that from Zaria and Ilorin.[4] Forty-eight percent of the patients were >60 years old in some works from the developed countries. [9,10,11,18]

The symptoms of uterovaginal prolapse in this review are similar to those reported in other centers.[4,10,11,18,21,24] The sensation of "something coming down the vagina" was the most common symptom, accounting for 76.2% of the cases; this is lower than the 92.8% reported from Ilorin, 93.4% from Ibadan and 88.1% from Zaria.[4,18,10] Stress incontinence was noted in 2.4% and is in agreement with reports by Ogunbode, *et al*, from Ibadan and Zaria, but lower than the 14.5% reported by Osinusi, *et al*, from Ibadan.[7,10,18] Stress incontinence as a complication of genital prolapse is not a common problem among Nigerian women when compared to their counterparts in the

developed world where as high as 52.4% of cases of stress incontinence have been reported in association with uterovaginal prolapse.[9,11]

The incidence of low backache of 26.2% is very low compared with 35.6% and 41.3% reported from Zaria and Ilorin, respectively; it was not also a prominent feature in the Ibadan review.[18,4,7,10] This might be due to the fact that most of our patients presented with higher degrees of uterovaginal prolapse.

According to Fergusson, most women developing genital prolapse are multiparous as in this review, yet, most multiparous women do not develop prolapse, indicating that it is the manner of child birth and not the number of children born that is significant.[26] Most of the patients in this review had difficult labour with unskilled personnel at home, commonly associated with prolonged labour and bearing down before full cervical dilatation.

Various fundal manipulations after delivery and Crede's manoeuvre to expel the placenta are still commonly practised by traditional birth attendants and these factors contribute to the accelerated damage to the muscular and fascial supports of the pelvic viscera predisposing to genital prolapse.[3,4,10,18] These factors might just be mere associations rather than aetiological because Onowhakpor, *et al*, found an incidence of genital prolapse in Port Harcourt, South-South Nigeria to be 1.6% with difficult labour.[27]

Decrease in the tone of the muscles and ligaments after menopause due to decreased estrogen secretions have been associated with genital prolapse.[1,2,3] It contributed to 59.5% of the patients reviewed in this study and is similar to the findings by other workers, but differs from the series from Port Harcourt where all of their patients were parous and postmenopausal, yet, the prevalence of uterovaginal prolapse was low.[27]

The most common type of genital prolapse in this review was the second degree type which accounted for most of the cases and this agrees with the reports from Zaria and Ibadan, respectively.[10,18] Vaginal hysterectomy and pelvic floor repair was the most commonly performed operation in this review, comparable to the findings from Ilorin and Zaria, but contrasts with the report from Ibadan.[4,18,10] This is due to the fact that most of our patients presented with higher degrees of uterovaginal prolapse.

The important factors in the choice of surgical management in this review were age, the patient's choice, parity, the number of living children, whether the patient had completed her desired family size, and the type of prolapse. Two out of the three patients under 30years of age with second degree uterovaginal prolapse had Manchester repair, while all the patients above 30years had vaginal hysterectomy with pelvic floor repair except for two who had a Manchester repair.

A primigravida had insertion of a ring pessary for second-degree prolapse in pregnancy. Pessaries are now widely used for troublous prolapse in the first trimester of pregnancy.[4,11,17,21,22,26] Women in the peri-menopausal age range do not need the uterus for further reproductive function though some may desire to maintain intact reproductive organs as they accept this as being synonymous with feminity.[18,26] Good counseling will help resolve this.

No mortality was recorded in this review, and immediate morbidity as a sequel of the surgical management was also insignificant (*p-value 0.465*). This may be attributable to proper patient selection, meticulous surgical technique, use of aseptic surgical techniques and prophylactic antibiotics used in the management of these patients.

The major limitations of this study were the fact that it was an institution-based study and the small sample size. These two limitations must be borne in mind when making extrapolations to the general population.

CONCLUSION

Grandmultiparity with unsupervised delivery was identified as the major risk factor in uterovaginal prolapse in this study. Therefore, skilled birth attendance at birth would prevent difficult labour and might help in reducing the prevalence, since difficult labour was the most common associated factor for genital prolapse in this study.

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