PELVIC ORGAN PROLAPSE IN LAGOS, NIGERIA

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Abstract

Background

Although not a life threatening condition, pelvic organ prolapse can affect a woman's quality of life by limiting physical, social, psychological and sexual functions. There is paucity of publication on the subject in Nigeria. We determined the incidence, pattern of presentation, factors determining treatment modalities and complications associated with surgical management of pelvic organ prolapse at the Lagos State University Teaching Hospital.

Methods

Retrospective review of all cases of pelvic organ prolapse managed between 1st January 1999 and 31st December 2008 was done. Data was analyzed using the Epi info version 3.5 statistical software of the Centre for Disease Control and Prevention, Atlanta, USA.

Results

The incidence of pelvic organ prolapse in this study was 0.74 per 1000 gynaecological consultations. The majority of the subjects were above 40 years and 64% were grandmultipara. The commonest presenting symptom was protrusion from the vagina which occurred in 96% of the subjects. Vaginal hysterectomy and pelvic floor repair was the commonest mode of management and was associated with higher post operative morbidity than other procedures.

Conclusion

Older and grand multiparous women are the principal sufferers of pelvic organ prolapse. Prevention through modification of obstetric risk factors, provision of adequate maternity care and family planning services is recommended.

KEY WORDS: *pelvic organ prolapse, Lagos, Vaginal Hysterectomy.*

Introduction

Pelvic organ prolapse is the downward descent of female pelvic organs including the bladder, urethra, uterus or post hysterectomy vaginal cuff, and the small or large bowel, resulting in the protrusion of the vagina, uterus or both[1]. Although not a life threatening condition, pelvic organ prolapse can affect a woman's quality of life by limiting her physical, social, psychological and sexual functions[1, 2, 3].

Although nulliparous women with pelvic organ prolapse are occasionally seen, the most important risk factor is high parity[1,4,5]. Apart from the number of vaginal deliveries, other obstetric factors that have been implicated include prolonged second stage of labour, instrumental vaginal deliveries, fetal macrosomia and poor surgical repair of perineal injuries[1,4]. Other factors such as increasing age, low level of oestrogen in post menopausal women, raised intra-abdominal pressure(as in chronic cough, constipation, heavy lifting), obesity, smoking and congenital weakness of the pelvic supports also contribute to the development of pelvic organ prolapse[1,6,7].

Pelvic organ prolapse is a significant problem in developed countries with reported life time risk of 11.1% for prolapse surgery in women by the age of 80 years in the USA[8]. The situation in developing countries may be far worse. This is mainly as a result of high fertility with early marriage and child bearing, many vaginal deliveries and home deliveries[9].

In Nigeria, about 60% of deliveries take place outside the health facility by unskilled attendants[10]. The incidence of complicated deliveries such as prolonged labour is bound to be high.

Community-based studies from neighboring West African countries have shown that pelvic organ prolapse is common in developing countries. In rural Gambia, 46% of 1067 women were found to have some degree of prolapse and in 14% of the women; the prolapse was severe enough to warrant surgical intervention[5]. Wusu-Ansah in his report from Ghana reported a prevalence of 12.07% among rural women[11]. Most of these women, however, did not seek treatment due to financial constraint.

There is, however, paucity of publication on this subject in Nigeria. The few reports on pelvic organ prolapse are based on hospital subjects. These reports however show that pelvic organ prolapse is an important gynaecological problem in this country[12,13,14,15,16.].

At the Obstetrics and Gynaecological Unit of the Lagos State University Teaching Hospital, no review has yet been done on pelvic organ prolapse. Against this background, the incidence of pelvic organ prolapse, pattern of presentation, factors determining the treatment modalities and complications associated with surgical interventions offered were reviewed.

Materials and Methods

The study was done at the Obstetrics and Gynaecology department of the Lagos State University Teaching Hospital, Ikeja, which is one of the two main referral centres in Lagos State, Nigeria's commercial nerve centre. The institution provides tertiary services in obstetrics and gynaecology and also serves as a centre for research and training.

A retrospective review of cases of pelvic organ prolapse managed at the institution over a 10-year period (1st January 1999 – 31st December 2008) was carried out. The medical records of all patients with the diagnosis of pelvic organ prolapse managed during this period were retrieved. There was a total of 126 patients but only 104 case notes were available and these formed the basis of further analysis. Information extracted from the case notes included their age, parity, occupation, menopausal status, presenting symptoms and signs, associated medical conditions, types of treatment or interventions, post-operative complications and mortality.

With regards to the grading of the prolapse, the recent internationally approved pelvic organ prolapse quantification (POPQ) system[17] was not used because it will apply only in a prospective study. We used the grading system described by Beecham in 1980[18] in which prolapse is rated in degrees during straining as follows:

- First degree: the lowest part of the prolapse descends halfway down the vaginal axis to the introitus.
- Second degree: the lowest part of the prolapse extends to the level of the introitus and through the introitus on straining.
- Third degree: the lowest part of the prolapse extends through the introitus and lies outside the vagina.

The total number of gynaecological consultations during the study period was also noted. Some patients were managed conservatively on outpatient basis while others were admitted for surgery.

Information obtained was entered into the computer and analyzed using the Epi info version 3.5 statistical software (2008 version) of the Centre for Disease Control and Prevention, Atlanta, USA and presented as simple percentages in tabular and descriptive forms.

Results

There were 126 cases of pelvic organ prolapse and 171, 182 gynaecological consultations at the gynaecological outpatients department during the study period, giving a hospital incidence of 0.74 per 1000 gynaecological consultations. Operations for genital prolapse were 70 out of 4643 major gynaecological surgeries and therefore formed 1.5% of the major gynaecological surgeries carried out during the period.

Table 1 shows the age, parity and menopausal status of the patients. The youngest subject was 27 and the oldest was 80 years old, with a mean age of 56.6 years. Twenty seven subjects (26%) were within the reproductive age while 77 (74%) were post menopausal.

Only 2 subjects (1.9%) were nulliparous, the remaining were multiparous, out of which 67 (64.4%) were grandmultipara.

Concerning the occupation of the subjects, 28.8% were housewives, 27.9% were traders, 16.3% were civil servants, and 14.4% were farmers, while 12.5% were retired.

Table 2 shows the presenting symptoms and degree of prolapse in the subjects. The commonest presenting symptom was a bulge or protrusion from the vagina which was present in 100 (96.2%) of the subjects. 83 patients had multiple symptoms. Other symptoms were urinary frequency in 28 subjects (26.9%), dysuria in 32 subjects (30.8%), incomplete voiding in 33 subjects (31.7%), stress incontinence in 6 subjects (5.8%), constipation in 22 subjects (21.2%), low back ache in 31 subjects(29.8%) and vaginal discharge 1n 10 subjects (9.6%).

Second degree uterovaginal prolapse featured most commonly, and it was found in 48 subjects (46.2%). First and third degree accounted for 28.8% (30 subjects) and 25% (26 subjects) respectively.

Fifteen subjects (14.4%) had decubitus ulceration at presentation, 10(9.6%) of these had third degree prolapse and 5(4.8%) had second degree prolapse. Forty two subjects (40.4%) had associated cystocele, 21 (20.2%) had associated rectocoele while 12 (11.5%) had associated enterocoele.

Associated medical conditions found in these patients include hypertension in 29 (27.9%), diabetes in 10 (9.6%), cardiac disease in 7 (6.7%), asthma and other obstructive airway diseases in 5 (4.8%). Seven subjects (6.7%) had had previous abdominal or pelvic surgeries (caesarean section, myomectomy and laparotomy).

Table 3 shows the type of management given in relation to the patient's parity. Surgery was the commonest modality of treatment and was employed in 70(67.3%) of the study subjects. The remaining 34(32.7%) were managed conservatively. The commonest form of surgery

was vaginal hysterectomy with pelvic floor repair (48.1%). Manchester repair was done in 4 (3.8%) of the patients, anterior colporrhaphy only in 9 (8.7%), anterior colporrhaphy with posterior colpo-perineorrhaphy for 7(6.7%). Conservative approaches employed were pessary use in 19 patients (18.3%) and pelvic floor exercises in 15(14.4%) of subjects. A 27 year-old nulliparous patient with second degree uterovaginal prolapse and infertility was offered Manchester repair while majority of the post menopausal patients and grandmultipara had vaginal hysterectomy with pelvic floor repair. Those who were unfit for surgery, those who declined surgery and those who were still awaiting surgery were offered conservative treatment.

The commonest post-operative complication was urinary tract infection (15.4%) as shown in Table 4. Others were vault infection (9.6%), febrile illness or sepsis (4.8%), acute urinary retention (5.8%), anaemia (6.7%), blood transfusion reaction (3.8%). Six subjects (5.8%) had multiple complications. Complications were higher in the vaginal hysterectomy group (33.3%) as compared to those that had other surgical procedures (20%). Only one patient reported recurrent vaginal discharge and ulceration with pessary use.

There were 2 post-operative deaths recorded giving a case fatality ratio of 1 in 35. Both were patients who had vaginal hysterectomy. One was a 55 year-old patient who had had a previous laparotomy for ruptured appendix and who developed acute intestinal obstruction and fever post-operatively. The other was a 69 year-old known cardiac disease patient who died from heart failure after surgery.

TABLE 1: AGE, PARITY AND MENOPAUSAL STATUS OF THE SUBJECTS

CHARACTERISTICS	FREQUENCY	PERCENTAGE
AGE IN YEARS		
21-30	8	7.7
31-40	10	9.6
41-50	14	13.5
51-60	24	23.1
61-70	35	33.7
71-80	13	12.5
PARITY		
0	2	1.9
1-4	35	33.7
5-9	67	64.4
MENOPAUSAL STATUS		
Pre-menopausal	27	26.0
Post-menopausal	77	74.0

TABLE 2: PRESENTIG COMPLAINTS AND DEGREE OF PROLAPSE

CHARACTERISTICS	FREQUENCY	PERCENTAGE
PRESENTING COMPLAINTS		
Protrusion	100	96.2
Vaginal discharge	28	26.9
Vaginal bleeding	10	9.6
Urinary frequency	28	26.9
Dysuria	32	30.8
Incomplete voiding	33	31.7
Stress incontinence	6	5.8
Constipation	22	21.2
DEGREE OF PROLAPSE		
First	30	28.8
Second	48	46.2
Third	26	25.0

TABLE 3: PARITY OF SUBJECTS AND TYPE OF MANAGEMENT

Parity	Anterior Colporraphy	Anterior + posterior Colporraphy	Manchester Surgery	Vaginal hyst. + Pelvic floor repair	exercise	Pessaries
0	1	0	1	0	0	0
1-4	4	4	3	12	8	4
5-9	4	3	0	38	7	15
Total	9 (8.7%)	7 (6.7%)	4(3.8%)	50(48,1%)	15(14.4%)	19(18.3%)

TABLE 4: POST-OPERATIVE COMPLICATIONS

CHARACTERISTIC	FREQUENCY	PERCENTAGE
Urinary tract infection	16	15.4
Vault infection	10	9.4
Febrile illness/ Sepsis	5	4.8
Acute urinary retention	6	5.8
Anaemia	7	6.7
Transfusion reaction	4	3.8
Mortality	2	1.9

Discussion

The incidence of pelvic organ prolapse at the Lagos State University Teaching Hospital from this review is 0.74 per 1000 gynaecological consultations and operations for prolapse accounted for 15 per thousand major gynaecological operations. This is surprisingly lower than what was reported from some other tertiary health institutions in Nigeria, when one considers the large population of Lagos State. Genital prolapse accounted for 21.57 per 1000 major gynaecological operations in Ilorin[13] and for 37.5 per 1000 gynaecological admissions in Port Harcourt[12]. The low incidence in this study may be due to the fact that in Lagos state, there are other tertiary health institutions and many private specialist hospitals manned by competent gynecologists that could provide alternatives for those patients who can afford their services.

The majority of our subjects were over 40 years of age. This is similar to reports from earlier studies in Nigeria[12,14]. A recent report from Ghana also showed that 61.9% of patients with pelvic organ prolapse were over 40 years[11]. None of our subjects was below 20 years of age. This is also similar to what was observed in Ibadan[14] and Port Harcourt[12] though a report from Ilorin recorded prolapse in a 19 year old[13].

Nearly all the patients (98.1%) in this study were multiparous, out of which 64.4% were grand multipara. This finding is also similar to that reported from within and outside the country[5,11,12,13,14,,19]. It is therefore likely that the stress of repeated pregnancies, labour and vaginal births on the genital supports is the major factor that predisposed these women to the development of prolapse. The finding of prolapse in two nulliparous women in this study, though uncommon has also been reported in other studies within the country[12,13]. It is thought to be due to congenital weakness in the pelvic support and defective collagen metabolism[19, 20,21].

The observation of a protrusion or sensation of a bulge from the vagina was the commonest presenting symptom and it was reported in 96.2% of our study subjects. Similar findings have been reported from within and outside Nigeria[12,13.22,23]. Close to a third of the study subjects had one urinary symptom or another, the commonest being a feeling of incomplete voiding in 31.7% and least common was stress incontinence in 5.8%. This low incidence of stress incontinence in our subjects is also similar to 4.2% reported from Port Harcourt[12]. In contrast, studies in the developed world show that it is a common problem, with occurrence as high as 78% in one report[21].

Vaginal discharge also featured in 26.9% of our subjects and this was present in all those that had decubitus ulceration at presentation. This supports the suggestion that it is a secondary complication, where the degree of prolapse becomes significant[2,13].

About thirty percent of the patients also complained of low backache. This is similar to 35.6% reported from Zaria[15]. It is thought to be due to pelvic pressure. Reports from the developed countries about back ache as a symptom of pelvic organ prolapse have been inconsistent and one case control study concluded that genital prolapse is not a cause of pelvic or low back pain[24].

The commonest type of genital prolapse in this review was second degree uterovaginal prolapse, which was found in 46.2% of our subjects. This is similar to 40.2% reported from Ilorin[13] though lower than 68.6% and 60.52% from Port Harcourt[12] and Ibadan[14] respectively.

Almost half of our study subjects (48.1%) had vaginal hysterectomy with pelvic floor repair as their mode of treatment. This is the traditional operative treatment for women who have completed their families or are post menopausal[1,2]. Manchester repair was done in only 3.8% of the patients. This surgical modality was employed in younger, premenopausal women who were either nulliparous, or had one living child and needed to conserve their uterus for further child bearing. Majority of our study subjects were multiparous and no longer desirous of further childbearing.

Of our subjects, 18.3% were managed with pessaries on out-patient basis and these included those who declined surgery, those who were unfit for surgery, due to concomitant medical conditions, and those still awaiting surgery. It could also be employed in those that present in pregnancy or who had previous surgical failures[1,2,25]. Most local reports did not however favor the use of pessaries due to the side effects of ulceration and infection, or due to non-availability especially since fitting a pessary involves trial and error.

However if properly selected and managed, serious adverse outcomes are rare and are over weighted by the benefits. Success rates as high as 81% have been reported on treatment for both prolapse and incontinence[25]. Only one of our subjects who were managed with pessaries reported vaginal ulceration with bleeding.

Some of our subjects (14.4%) were also offered pelvic floor exercises (kegel's exercise) as a modality of treatment especially in those with first degree prolapse who were awaiting surgery or who declined surgery and could not source a pessary yet. These exercises strengthen the pubococcygeus muscles and it has even been suggested as first line treatment for urinary and faecal incontinence[2]. It however requires high patient motivation, as well as supervised instructions on how to perform it.

The morbidity rate for the operations carried out in this review (33.3% for vaginal hysterectomy and 20% for other surgeries) is lower than that reported from some other Nigerian centres[13,14] though still higher than that from the developed world[23] .However, as with most studies, they affected the urogenital tract most[12,13,14,23]. The two deaths recorded stress the need for more careful preoperative assessment and intra and post operative surveillance as many of these patients are high risk cases.

Conclusion

Pelvic organ prolapse is predominantly a clinical problem of the middle aged and elderly. As our population ages and the average life expectancy increases, conditions which alter the quality of life like pelvic organ prolapse will demand more attention from our health care services. The ability to screen, diagnose and manage these entities is becoming of increasing importance to the health workers. Prevention can be achieved through modification of obstetric risk factors. Effective, accessible and affordable maternity care and family planning services will be invaluable in this regard. Post-natal pelvic floor exercises and physiotherapy should also be encouraged.

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