

Surgical management of uterine fibroids in a tertiary hospital in south-west Nigeria

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ABSTRACT

Context: Symptomatic uterine fibroids are frequently encountered in gynecological practice in black populations. An evaluation of the surgical management is in order to audit practice, highlight complications, and facilitate care.

Aims: This study aimed to evaluate morbidity following abdominal myomectomy and hysterectomy for symptomatic uterine fibroids.

Settings and Design: A cross-sectional study retrospectively reviewing cases of symptomatic uterine fibroids that were managed surgically at a tertiary hospital in south-west Nigeria.

Methods and Material: Surgeries performed over a five-year period were retrieved from the gynecological theatre of the hospital. The case notes were retrieved and information on socio-demographic, perioperative and postoperative characteristics was obtained.

Statistical analysis used: Chi-square tests and Student's-t tests were performed to evaluate categorical and continuous variables, respectively. Significant *P* was set at < 0.05.

Results: Of 214 eligible cases, 79 (36.9%) had hysterectomy and 135 (63.1%) had myomectomy. No other surgical treatment methods were employed. Age was the only significant socio-demographic feature; younger women were more likely to have myomectomy (*P* < 0.001). Mean blood loss and transfusion rates were comparable between the two groups. Complications included hemorrhage in 36.0%, wound infection in 4.7%, and postoperative fever in 1.9%. There were no conversions of myomectomy to hysterectomy and no mortalities. There was no significant difference in the prevalence of complications in either surgery group.

Conclusions: Apart from hemorrhage, morbidities were few in this series. Gynecologists should ensure adequate preparations to control blood loss before and during fibroid surgery.

Key words: Fibroids; hemorrhage; hysterectomy; myomectomy.

Introduction

Uterine fibroids are benign tumors of the uterus composed of smooth muscle and connective tissue.^[1] These tumors are the most common uterine neoplasm with incidence rates of 30%–40% in women above 40 years of age.^[2] They can enlarge the uterus significantly and predispose to ureteric compression, urinary retention, constipation, and tenesmus.^[3]

In retrospective studies from Nigeria, symptoms from uterine fibroids were present in 9.8%–13.6% of all gynecological

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admissions.^[4,5] They can increase uterine size as much as 36 weeks; however, most were between 13 and 16-week size at presentation.^[6]

Abdominal myomectomy and hysterectomy are frequently performed for fibroids. In the Nigerian study, 9.3% of all cases over 25 years period were managed surgically^[6]; rates for abdominal hysterectomy and myomectomy were as high as 70.4% and 86% respectively.^[7]

Though newer modalities for nonsurgical or noninvasive modes of management are now available,^[8] the use of uterine artery embolization, temporary transvaginal occlusion of the uterine arteries, fibroid myolysis, and magnetic resonance-focused ultrasound surgery are not yet widespread in Nigeria. Conventional myomectomy and hysterectomy remain prominent on operation lists. Surgery may be followed by injuries to contiguous organs such as the bladder, ureters, and bowel, hemorrhage with severe anemia, infections, pyrexia, and fistula formation.^[9,10]

Symptomatic uterine leiomyomas are frequently encountered in gynecology, therefore, there is a need to evaluate their surgical management in order to audit practice and identify areas that require further research and clinical trials. This study aimed to identify complications or morbidities following abdominal myomectomy and hysterectomy for symptomatic uterine fibroids.

Subjects and Methods

This was a retrospective study of hospital records over a 5-year period at a tertiary hospital in south-west Nigeria. During this period, 2,888 patients were admitted to the hospital's gynecology wards. Five hundred and fifty patients had a clinical diagnosis of uterine fibroids. Surgical treatment with abdominal myomectomy or hysterectomy was performed in 261 cases (47.5%). We excluded cases without histological evidence of leiomyomata and cases that included evidence of malignancy. With these criteria, 47 more cases were excluded with 214 cases forming the study population.

Socio-demographic characteristics, obstetric and gynecological history, perioperative and postoperative characteristics were recorded in a proforma. Uterine size was determined by clinical assessment using comparison to equivalent gestational age in weeks. Fibroids were classified by pelvic ultrasound into subserous, submucous, intramural, or multiple (> 1) types.

Each surgery was done by either a consultant or senior resident (PGY 4 or higher) as a lead surgeon. A Foley's catheter

was used as a tourniquet at the cervical-isthmic junction for hemostasis during all myomectomies, chemical hemostasis was not utilized. Estimation of blood loss was done by the anesthetist, the total amount from the suction bottle, pieces of gauze, abdominal packs, and blood lost in the drapes was used to calculate the intraoperative blood loss.

Morbidity was defined as any alteration in normal physiological function due to the surgery. Hemorrhage was defined as blood loss > 1000 ml at surgery and pyrexia was a temperature in first 72 hours of >37.5°C. Data was collated and entered into a datasheet using SPSS v. 14.0 (Chicago, Illinois). Frequency tables and the Chi-square test were used for categorical data and continuous variables were analyzed using the independent *t*-test. Significant *P* value was <0.05.

Results

The mean age of the population was 38.3 ± 6.9 years (range: 26–61 years), majority of them were in the 37–47 years age group (62.1%). Table 1 compares socio-demographic and clinical variables in both groups. Age was the only significantly different variable—younger women were more likely to have myomectomies. Seventy-nine patients (36.9%) had hysterectomy (HST) and 135 women (63.1%) had myomectomy (MYO). The median uterine size was 18 weeks for the whole group. For MYO patients, the median uterine size preoperatively was 20 weeks (8–38 weeks) and the HST group had a preoperative median size of 18 weeks (8–36 weeks).

Table 2 compares the sites of myomas in patients of either group, most fibroids were intramural. Table 3 compares preoperative, intraoperative, and postoperative characteristics in both groups. No intraoperative or postoperative mortality occurred. No significant differences were observed. The prevalence of complications was 22.7% (46 participants). Transfusion rates were 34.3% in the MYO group and 39.5% in the HST group (*P* = 0.31) (even though there were more patients transfused in the MYO than the HST group). The incidence of morbidities was also comparable between the two groups. Hemorrhage occurred in 77 (36.0%), wound infection in 10 (4.7%) and postoperative fever in 4 (1.9%). One patient in the HST group had vault cellulitis (0.5%). There was no conversion to hysterectomy in the myomectomy group. No significant difference was observed in the prevalence of complications in either surgery group.[Table 4].

Discussion

This study aimed to determine the prevalence of complications following surgical management of fibroid

Table 1: Comparison of sociodemographic characteristics amongst participants

Variable	Hysterectomy n (%)	Myomectomy n (%)	Total n (%)	P
Age group (yrs)				
26-36	3 (4.23)	68 (95.77)	71 (100)	<0.001*
37-47	67 (50.38)	66 (49.62)	133 (100)	
≥48	9 (90.00)	1 (10.00)	10 (100)	
Occupation				
Unemployed	2 (18.18)	9 (81.82)	11 (100)	0.684*
Semiskilled	24 (36.92)	41 (63.08)	65 (100)	
Highly skilled	32 (37.65)	53 (62.35)	85 (100)	
Others	4 (50.00)	4 (50.00)	8 (100)	
Religion				
Christian	61 (35.88)	109 (64.12)	170 (100)	0.308
Muslim	17 (44.74)	21 (55.26)	38 (100)	
Educational status				
Primary	5 (83.33)	1 (16.67)	6 (100)	0.051*
Secondary	3 (30.00)	7 (70.00)	10 (100)	
Tertiary	31 (31.96)	66 (68.04)	97 (100)	
Marital Status				
Married	33 (32.04)	70 (67.96)	103 (100)	0.154
Not married	46 (41.44)	65 (58.56)	111 (100)	

*Fisher's exact test

Table 2: Sites of fibroid location

Variable	HST n (%)	MYO n (%)	Total
Location			
Sub serous	1 (33.33)	2 (66.67)	3 (100)
Intramural	33 (37.93)	54 (62.07)	87 (100)
Sub mucous	3 (50)	3 (50)	6 (100)
Cervical	2 (50)	2 (50)	4 (100)
Multiple (≥2 types)	4 (22.22)	14 (77.78)	18 (100)

*Fisher's exact test

uteri by myomectomy or hysterectomy. In our study, the only significant socio-demographic variable for was age. This highlighted the tendency towards uterine conservation in younger women. The spectrum of morbidities were similar to that found in previous research; hemorrhage, wound sepsis, and pyrexia.^[9-12]

Abdominal myomectomy has been associated with a greater likelihood of morbidities, particularly fever,^[13,14] partly explained by bleeds into the cavities left by enucleated fibroids. Apart from hemorrhage, morbidities were few in this series. There were no significant differences in the two groups; though, the small sample size may be a contributory factor.

Our study has re-emphasized the need to prepare for and prevent occurrence of hemorrhage during fibroid surgery. This commences from the preoperative work up, ensuring

Table 3: Comparison of Pre-, Intra- and Post-operative characteristics between study groups

Variables	HST Mean (SD)	MYO Mean (SD)	P (CI)
PCV pre-op (%)	34.67 (5.05)	35.06 (4.37)	0.725 (-2.61-1.83)
Blood loss (ml)	744.23 (402.82)	793.06 (1225.21) (-375.56-277.90)	0.767
Blood transfusion (units)	1.67 (1.2)	2.15 (1.69)	0.296 (-1.42-0.45)
Hospital stay (days)	8.92 (3.97)	8.18 (6.23)	0.494 (-1.42-2.91)
PCV at discharge (%)	30.38 (3.08)	30.55 (4.22)	0.878 (-1.75-1.50)

Table 4: Post-operative complications

	Hysterectomy: No (%)	Myomectomy: No (%)	p
Hemorrhage	26 (32.9)	51 (37.8)	0.54
Postoperative pyrexia	1 (1.2)	3 (2.2)	>0.99
Wound infection	6 (7.3)	4 (2.9)	0.18
Others	1 (1.3)	0 (0.0)	>0.99

blood and blood products are made available, and the use of hemostatic techniques. In our study, the only intraoperative method used to aid hemostasis for myomectomy was mechanical, the Foley's catheter. The importance of ensuring meticulous surgical technique in securing vascular pedicles during hysterectomy and closure of cavities following enucleation of fibroid nodules cannot be overstated. Studies have also highlighted the availability of pharmacological or chemical methods for control of hemorrhage during myomectomy.^[13,14]

In conclusion, there may not be any significant difference in the incidence and types of morbidities following abdominal myomectomy or hysterectomy for uterine fibroids. Gynecologists should ensure adequate preparations to control blood loss before and during fibroid surgery. The efficacy of hemostatic agents during myomectomy in our environment may also require further study.

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Conflicts of interest

There are no conflicts of interest.

References

1. Kwawukume EY. Leiomyoma of the uterus. In: Kwawukume EY, Emuveyan EE, editors. *Comprehensive Gynecology in the Tropics*. Ghana: Asante and Hittscher Printing Press Ltd.; 2002. p. 124-37.
2. Okolo S. Incidence, etiology and epidemiology of uterine fibroids. *Best Pract Res Clin Obstet Gynecol* 2008;22:571-88.
3. Gupta S, Jose J, Manyonda I. Clinical presentation of uterine fibroids. *Best Pract Res Clin Obstet Gynecol* 2008;22:615-26.
4. Obuna JA, Umeora OU, Ejikeme BN, Egwuatu VE. Uterine fibroids in a

- tertiary health center in South East Nigeria. *Niger J Med* 2004;13:318-29.
5. Okezie O, Ezegwui HU. Management of uterine fibroids in Enugu, Nigeria. *J Obstet Gynecol* 2006;26:363-5.
 6. Okogbo FC, Ezechi OC, Loto OM, Ezeobi PM. Uterine leiomyomata in South-western Nigeria: A clinical study of presentation and outcome. *Afr Health Sci* 2011;11:271-8.
 7. Omole-Ohonsi A, Belga F. Surgical management of uterine fibroids at Aminu Kano Teaching Hospital. *Obst Gyne Int* 2012;2012:702325.
 8. Istre O. Management of symptomatic fibroids: Conservative surgical treatment modalities other than abdominal or laparoscopic myomectomy. *Best Pract Res Clin Obstet Gynecol* 2008;22:735-47.
 9. Frederick J, Hardie M, Reid M, Fletcher H, Wynter S, Frederick C. Operative morbidity and reproductive outcome in secondary myomectomy: A prospective cohort study. *Hum Reprod* 2002;17:2967-71.
 10. Mohammed NB, Noor Ali R, Ananda Kumar C. Uterine fibroid: Clinical presentation and relative morbidity of abdominal myomectomy and total abdominal hysterectomy, in a teaching hospital of Karachi, Pakistan. *Singapore Med J* 2002; 43:289-95.
 11. Pundir J, Walawalkar R, Seshadri S, Khalaf Y, El-Toukhy T. Perioperative morbidity associated with abdominal myomectomy compared with total abdominal hysterectomy for uterine fibroids. *J Obstet Gynecol* 2013;33:655-62.
 12. Pundir J, Krishnan N, Siozos A, Uwins C, Kopeika J, Khalaf Y, *et al.* Perioperative morbidity associated with abdominal myomectomy for very large fibroid uteri. *Eur J Obstet Gynecol Reprod Biol* 2013;167:219-24.
 13. Rybak EA, Polotsky AJ, Woreta T, Hailpern SM, Bristow RE. Explained compared with unexplained fever in postoperative myomectomy and hysterectomy patients. *Obstet Gynecol* 2008;111:1137-42.
 14. Bukar M, Audu BM, Melah GS. Myomectomy at the Federal Medical Centre Gombe. *Niger J Med* 2009;18:94-7.