

# A Ten-Year Survey of Uterine Fibroids in a Tertiary Hospital in Niger-Delta Region of Nigeria

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## ABSTRACT

**Background:** Uterine fibroid is a common gynaecological problem among women of reproductive age, and it commonly affects the quality of life of the affected women.

**Objective:** To determine the prevalence, clinical presentation and management outcome of uterine fibroid at the Delta State University Teaching Hospital, Oghara, Nigeria.

**Methodology:** This was a ten-year retrospective descriptive study of patients with uterine fibroids managed at Delta State University Teaching Hospital, Oghara from January 1, 2014 to December 31, 2023. Folders of patients who were managed for uterine fibroid were retrieved from the medical records of the hospital, and relevant information on socio-demographic parameters (such as age, parity, level of education), clinical presentations and mode of treatment was extracted and analyzed using SPSS version 26.

**Results:** The prevalence of uterine fibroid was 27.7%. The mean age was  $36.3.2 \pm 8.05$  years. The modal age group was 31 – 39 years. The commonest clinical presentation was infertility (78.4%). Majority of patients (97.4%) had open myomectomy.

**Conclusion:** Uterine fibroid is a common benign gynaecological tumour. The majority of patients presented with infertility. Myomectomy was the commonest mode of treatment because most of the patients were in reproductive age group and desirous of fertility. Future application of newer techniques may reduce the prevalence of open myomectomy.

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**Keywords:** Leiomyoma, Menorrhagia, Myomectomy, DELSUTH, Nigeria.

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## INTRODUCTION

Uterine fibroid is a common gynaecological problem among women of reproductive age.<sup>1</sup> It is a common reason for gynaecological consultation in most Nigerian hospitals as well as the most common benign genital tract tumour in women of reproductive age.<sup>1,2</sup> It is a benign, monoclonal tumour of the smooth muscles cells of the myometrium, and composed of large amounts of extracellular matrix containing collagen, fibronectin, and proteoglycan.<sup>3</sup>

Uterine fibroid has been reported to affect 20-40% of women of reproductive age, particularly in their third and fourth decades.<sup>4</sup>

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In 2010, World Health Organization (WHO) reported that about 20-25% of reproductive women will have uterine fibroids.<sup>5,6</sup> The incidence in Nigeria varies among studies and ranges between 6.5%, to 13.5% of gynaecological admissions among the different geographical zones.

Despite the fact that the cause is unknown, there is considerable evidence that estrogens and progesterone enhances tumour growth as the fibroids rarely appear before menarche and regress after menopause.<sup>7,8</sup> Risk factors for developing uterine fibroids include nulliparity, early age at menarche, familial predisposition, black race and overweight; high parity and tobacco smoking may protect from developing myomas.<sup>2,5</sup>

The clinical presentations of uterine fibroid are variable; more than 50% are asymptomatic, some patients may present with heavy menstrual bleeding, pelvic pain, and sub-fertility.<sup>9</sup> Other clinical features include abdominal swelling, pelvic pressure, urinary frequency, compressive bowel symptoms.<sup>5,9</sup> In this environment, most women with uterine fibroids present late to the hospital with large tumours size (uterus greater than 20-week size gestation), which is associated with increased morbidity and infertility.<sup>6</sup>

Myomectomy and hysterectomy are the commonest accepted surgical interventions for patients with symptomatic uterine fibroids worldwide. Hysterectomy is considered as the gold standard for treatment, however, in women of reproductive age of low parity and wish to maintain their menstrual and fertility functions and where there is an aversion to hysterectomy, myomectomy, via open or minimal access route becomes the preferred option, with varying degrees of complications.<sup>1,10</sup>

Despite the florid reports on uterine fibroids globally, there is paucity of reports on the subject matter from this institution, and the much available data is an epidemiological review conducted more than five years and scanty reports from the surrounding communities. Hence, this research work was conducted to determine the prevalence, clinical presentation and management outcome of uterine fibroids in DELSUTH over a ten-year period.

## MATERIALS AND METHODS

This was a ten-year retrospective descriptive study carried out at the department of Obstetrics and Gynaecology of Delta State University Teaching Hospital (DELSUTH) Oghara, Delta State, Nigeria. The study was conducted over a ten year period, starting from January 1, 2014 to December 31, 2023.

Delta State University Teaching Hospital, Oghara provide specialist care to patients, and serve as major

referral centre to Delta state and neighbouring towns in Edo, Rivers and Bayelsa States.

## STUDY POPULATION

This consisted of all women who were seen and managed for uterine fibroid during the study period.

## DATA COLLECTION

Permission to access hospital records and data for this study was obtained from the hospital management. Ethical approval for this study was obtained from the Institution Health Research and Ethics Committee. (REF:DELSUTH/HREC/2025/094/0905)

The case notes of all patients who were managed for uterine fibroid were identified from the record and gynaecological registers in the wards, theatre, and clinics. The required information was extracted from these case notes and registers using a data collection proforma designed for this purpose. The information included socio-demographic parameters (such as age, parity, level of education), clinical presentations, and mode of treatment. The data were collated, coded and analyzed with the aid of SPSS version 26 using simple descriptive statistics, and the results were presented in tables.

Prolonged post operative pain is regarded as pain occurring at least 6weeks duration following the surgical procedure when other causes of pain, such as malignancy or chronic infection have been excluded<sup>11</sup>

## RESULTS

During the period under review, a total of 10,030 gynaecological cases were seen, 2780 of them were seen and managed for uterine fibroid alone. This gives prevalence of uterine fibroid 27.7% of all gynaecological cases. However, 2310 patients' case notes were found and retrieved from the hospital medical records department and this formed the basis for further analysis.

**Table 1:** Table showing socio-demographic and obstetrics characteristics

*Table 1 showed the socio-demographic and obstetrics characteristics of the study participants. The mean age of the participants was 36.3 ± 8.05 years with a modal age group of 30-39 years old (52.4%). Majority of the participants were married (87.4%), about half had a tertiary level of education (48.9%) with many being involved in skilled businesses (44.2%) and most being nulliparous(60.2%).*

Characteristics	Frequencies		Percentages		Method of treatment	Frequency	Percentage (%)
		(n)		(%)			
Age (years)	≤19	20	0.9		Expectant	0	0
	20-29	410	17.7		Medical	20	0.9
	30-39	1210	52.4		Myomectomy	2260	97.4
	40-49	460	19.9		Hysterectomy (TAH and Subtotal)	40	1.7
	≥50	210	9.9		Total	2310	100
	Meand ± SD	36.3± 8.05		TAH: Total abdominal hysterectomy.			
Marital Status	Single	290	12.6	Table 3 illustrated the various treatment modalities received by the study participants, as most patients had myomectomy (97.4%). Twenty (0.9%) and 40 (1.7%) of the participants had medical management and hysterectomy respectively			
	Married	2020	87.4				
Educational level	No formal education	320	13.9				
	Primary	410	11.7				
	Secondary	450	19.5				
	Tertiary	1130	48.9				
Occupation	Unemployed	310	13.4	Table 4: Table showing the complications of the study participants.			
	Unskilled labour	270	11.7				
	Skilled labour	1020	44.2				
	Business	710	30.7				
Parity	Nullipara	1390	60.2				
	Primipara	440	19.0				
	Multipara	460	19.9				
	Grand multipara	20	0.9				

**Table 2:** Table Showing the clinical symptoms of the study participants

Clinical Symptoms **	Frequencies (n)	Percentages(%)
Infertility	1810	78.4
Menorrhagia	720	31.2
Lower abdominal pain	290	12.6
Lower abdominal swelling	190	8.2
Dysmenorrhoea	180	7.8
Recurrent abortions	80	3.5
Urinary Tract Symptoms	30	1.3

\*\* – Some participants had multiple symptoms

Table 2 showed the various presenting clinical symptoms by the study participants. The commonest presenting symptom was infertility (78.4%); other symptoms included menorrhagia (31.2%), lower abdominal pain (12.6%) and recurrent abortions (3.5%).

**Table 3:** METHOD OF TREATMENT OF UTERINE FIBROIDS

Complications	Frequencies (n)	Percentages (%)
Prolonged post-Op pain	1540	66.7
Anaemia	50	2.2
Fever	260	11.3
Wound breakdown	370	16
Urinary Tract Infection	10	0.4
Need for Blood Transfusion	80	3.5

**DISCUSSION**

This study assessed the prevalence, clinical presentation, and management outcomes of patients with uterine fibroids. The prevalence of uterine fibroid in this study was 27.0%. This was similar 29.5% prevalence reported by Ekine et al in Okolobiri, Nigeria.<sup>6</sup> However, Zimmermann et al reported 4.5 – 9.4% in UK and 9.85 – 17.6% in Italy in their work conducted via an international internet-based online survey in different countries.<sup>8</sup> Our finding may be attributed to the fact that Delta State University Teaching Hospital is the major referral centre for hospitals within and outside Delta State, and is also located in same Niger-Delta region where Okolobiri is located. More so, black populace are more at risk of developing uterine fibroid than their white counterparts. The modal age group in this study was 21 – 29 years with a mean age of 28.68 ± 7.49. This was similar to report by Ross et al in UK and lower than 33.3±4.7 years reported by Odunvbun in a neighboring

community.<sup>12,13</sup> Uterine fibroid is shown to be common in women of reproductive age group. This is attributed to the high levels of estrogen and progesterone elaborated by this age group, thus stimulated the monoclonal fibres of the uterus that eventually results in fibroid development. Nulliparity accounted for 50.0% of the study populations. This findings was similar to reports from different Geo-political zones of Nigeria; Madunatu et al, in Awka, Ibinaiye et al in Jos and Olotu et al in Port Harcourt with a higher number of nulliparous ladies at risk of uterine fibroid<sup>14,14</sup>; however, Ekine et al reported that multiparous women were more at risk.<sup>6</sup> Nulliparity is said to be a risk factor for uterine fibroid because most nulliparous women are within the reproductive age group where the hormones plays a significant role in its development

This study showed that the most common clinical presentation was infertility and this accounted for 78.4% of the study population. This finding was contrary to findings reported by Madunatu et al in Awka, Nigeria and Adawe et al in Uganda who reported abdominal swelling (59%) and pelvic pain (72.2%) respectively as the commonest symptoms. Our study reported higher incidence of infertility because most of the patients presented for fertility evaluation and during the course of evaluation, they were found to have uterine fibroids. Majority of the patients (97.4%) had abdominal myomectomy and was similar to 97.3% reported by Ekine et al in Okolobiri, Nigeria.<sup>6</sup> Open myomectomy was the most common surgical procedure done for women with uterine fibroid because majority of the patients were women of reproductive age who presented to clinicians for fertility evaluation and a uterine sparing surgery such as myomectomy was needed to preserve the uterus for future conception. The most common complication was prolonged post-operative pain and this amounted to 66.7%. This was contrary to anemia reported by Madunatu et al as the most common post operative complication.<sup>1</sup> Surgery thought beneficial, is not without complications as post operative pain was the major complain in our findings and this could be attributed to tissue trauma, inflammation and healing that occurs following tissue injury and also the sub-optimal dose of analgesic used following the surgery.

## CONCLUSION

The uterine fibroid is the most common gynaecological condition seen in women of reproductive age group. Infertility was the leading cause of hospital consultations among the women and myomectomy was the commonest mode of treatment especially among pre-menopausal women due to their fertility needs

**THE LIMITATION OF THE STUDY.** It was difficulty in retrieving all the case files; however, the findings were still relevant.

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