

International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622
© Gynaecology Journal
www.gynaecologyjournal.com
2024; 8(1): 15-19
Received: 20-10-2023
Accepted: 25-11-2023

Chimezie Michael Madunatu
Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria

Chukwuemeka Chukwubuikem Okoro
Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria

Chukwudubem Chinagorom Onyejiaka
Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria

Chukwunonso Isaiah Enechukwu
a) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria
b) Department of Chemical Pathology, Nnamdi
Azikiwe University Awka, Anambra State, Nigeria

Chukwuemeka Jude Ofojebe
a) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria
b) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Awka, Anambra State,
Nigeria

Vincent Chinedu Ani
a) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria
b) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Awka, Anambra State,
Nigeria

George Uchenna Eleje
a) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria
b) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Awka, Anambra State,
Nigeria

Ikechukwu Innocent Mbachu
a) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria
b) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Awka, Anambra State,
Nigeria

Chigozie Geoffrey Okafor
Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria

Amarachukwu Doris Okoro
College of Nursing, Nnamdi Azikiwe University
Teaching Hospital Nnewi, Anambra State, Nigeria

Christiana Nkiru Okafor
Department of Nursing Science, School of
Medicine, Kabale University, Uganda

Charlotte Blanche Oguejiofor
a) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria
b) Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Awka, Anambra State,
Nigeria

Stephen Chijioke Eze
Department of Obstetrics and Gynaecology,
Federal Medical Centre Jabi, FCT Abuja, Nigeria

Corresponding Author:
Chukwuemeka Chukwubuikem Okoro
Department of Obstetrics and Gynaecology,
Nnamdi Azikiwe University Teaching Hospital,
Nnewi, Anambra State, Nigeria

A 5-year retrospective review of the presentation pattern and management outcomes of uterine fibroids in a Nigerian tertiary Hospital

Chimezie Michael Madunatu, Chukwuemeka Chukwubuikem Okoro, Chukwudubem Chinagorom Onyejiaka, Chukwunonso Isaiah Enechukwu, Chukwuemeka Jude Ofojebe, Vincent Chinedu Ani, George Uchenna Eleje, Ikechukwu Innocent Mbachu, Chigozie Geoffrey Okafor, Amarachukwu Doris Okoro, Christiana Nkiru Okafor, Charlotte Blanche Oguejiofor and Stephen Chijioke Eze

DOI: <https://doi.org/10.33545/gynae.2024.v8.i1a.1410>

Abstract

Background: Uterine fibroids are common gynecological condition affecting reproductive age women. Although fibroids are considered benign, they are a cause of major quality-of-life issues for women in their reproductive age.

Objectives: To determine the prevalence, pattern of presentations and management outcomes of uterine fibroids over a 5-year period.

Materials and Methods: This is a retrospective review of the prevalence, clinical presentations and outcome of management of uterine fibroid over a 5-year period (between January 1st 2017 and 31st December 2021) at Nnamdi Azikiwe University Teaching Hospital (NAUTH). The case files of women who were managed for uterine fibroid during this period were obtained from the hospital's Health Record department to extract relevant information. The social, demographic and clinical data of the subjects were extracted using a designed proforma. The outcome measures included the prevalence, clinical presentations and management outcomes of uterine fibroids. Data was analysed using the SPSS 26.0 IBM Corporation.

Results: The prevalence of uterine fibroids was 10.7% of all gynaecological cases that presented to the clinic. Participants, mean age was 39.11±7.01 years, most (75.4%) being nulliparous. Abdominal swelling was the commonest (62.3%) pattern of presentation and most of the subjects presented late with mean duration of symptoms of 38.2±9.82 months. Surgery was the commonest method of treatment with myomectomy being the modality used in 86.5% of subjects. The common postoperative complications were anemia which was reported in 15.2% of the subjects.

Conclusion: Uterine fibroids prevalence in this review of 10.66% is high and so also is the associated complications. The symptoms correlate with delayed presentations common in our locality. Surgical management comprising predominantly myomectomy and hysterectomy remained the commonest treatment option in our environment.

Keywords: Fibroids, leiomyoma, myoma, presentation, myomectomy, outcome

Introduction

Uterine fibroids are the commonest benign tumors in females, and has high prevalence in Blacks [1, 2]. The actual prevalence is likely higher than estimated, as the histologic incidence is far higher than reported clinically [3]. Uterine fibroids affect women of reproductive age with peak age of incidence of between 30 and 40 years [2, 4].

In Nigeria, fibroids are the commonest tumour among females, as it occurs in more than 80% of females above the age of 25. Majority of fibroids are, however, asymptomatic and are discovered during routine ultrasound scanning. Asymptomatic fibroids usually need no treatment. Only about 20% of fibroids are clinically apparent [5] and present with symptoms such as menorrhagia, dysmenorrhea, non-cyclical pelvic pain, infertility and recurrent miscarriage [5, 6]. Large fibroids can cause symptoms due to its mass effect including abdominal protrusion, bowel and bladder dysfunction.

The management options for uterine fibroids can be medical or surgical. Globally, myomectomy and hysterectomy are the commonest and most effective surgical treatment in the management of fibroids [7]. Even though hysterectomy is considered the ultimate treatment for uterine fibroid, it precludes pregnancy. Myomectomy is preferred in situations where fertility is needed to be preserved or where there are cultural or religious aversion to hysterectomy. Complications of myomectomy like peritoneal and intrauterine adhesions can impact negatively on reproduction. With or without treatment, fibroids have negative impact on the quality of life and reproductive potential of the female folk. If the women get pregnant, they are at increased risk of miscarriage, intra-uterine growth restriction, preterm labour, obstructed labour, operative delivery and primary postpartum haemorrhage [8].

Our study was done with the aim to assess the prevalence, clinical presentations, management options and outcomes of uterine fibroids in a Tertiary health institution in Nigeria within a 5-year period.

Methods

Study design: The study is a five-year cross-sectional retrospective study of cases of uterine fibroids.

Study population: The study population were women who were managed for uterine fibroid in NAUTH Nnewi between January 1st, 2017 and December 31st, 2021.

Study setting: This study setting was the Gynaecology outpatient clinic and ward of Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Nigeria. It is a tertiary hospital with 400 beds, and located in Anambra State, South Eastern Nigeria. The health facility caters for the health needs of the inhabitants of Nnewi and the neighbouring towns. It is a training centre for both under-graduate and post-graduate medical studies.

Eligibility Criteria: The study included women who were managed for uterine fibroids between January 1, 2017 and December 31, 2021. We excluded patients with adenomyosis, cancer or with co-existing pregnancy. We also excluded cases with incomplete records.

Sample Size: The study was an all population-based study.

Sample Technique and Procedure: The sampling technique adopted for the study was a non-random sampling. Records from the registers in the gynaecology clinic, ward and theatre were used to retrieve the relevant file numbers and information on the number of gynaecological presentations, admissions and surgeries over the study period. Available and relevant case files from the health records department were retrieved and accessed. The social and demographic variables, clinical presentations, treatments offered and outcome of treatment of the participants were obtained from the case files and recorded using proformas.

Study outcome measures: The outcome measure were the

prevalence, clinical presentations and management outcomes.

Analysis of Data: The data was analysed using the Statistical Package for Social Sciences (SPSS) computer software version 26.0 IBM Corporation.

Results

Out of 3196 gynecological cases that presented to the clinic, 341 were cases of uterine fibroids making the prevalence 10.66%. Only 244 case files with adequately filled information were retrieved from the health record department making the retrieval rate 71.55%. The most prevalent age range was between 36 and 45 years at 46.3% while the mean age was 39.11±7.01 years. The parity of the patients ranged from 0 to 7 with most (75.4%) of the participants being nulliparous. Abdominal swelling was the most common complaint at presentation and was reported in 62.3% (152) of the participants. Others were menorrhagia (25%, 61/341), infertility (22.5, 55/341), dysmenorrhea (16%, 39/341), abdominal pain (14.3, 35/341), vaginal protrusion (1.6, 4/341) and the least mode of presentation was recurrent miscarriage (0.4%, 1/341). Several patients had more than one symptom. The mean duration of earliest symptom at presentation was 38.2±9.82 months and a range of 3 to 96 months. The anatomical location of the fibroids in the uterus is as shown in Table 2.

Table 2 shows the mode of treatment. It shows that the most (86.5%) of the participants had myomectomy, 7.3% (18) had hysterectomy while 4.1% (10) were managed conservatively. The biggest fibroid mass weighed 15 kg with mean weight of 11.322kg and highest number of fibroid nodules recorded was 72. About 20.9 % (51) of the subjects were transfused intraoperatively; 5.3% (13) and 18.9% (46) of subjects received parenteral ergometrine and tranexamic acid respectively during surgery to enhance hemostasis. Peritoneal drain was used following surgery in 10.7% (26) of the subjects.

Postoperative complications seen among the subjects are shown in Table3. Postoperative anemia was seen in 15.2% (37) of the subjects. Wound infection and post operation pyrexia were reported in 1.2% (3) and 2.5% (6) of the participants.

Table 1: Age and parity of participants

Variables	Frequency	Percentage
Age range		
<=25 years	3	1.2
26-35 years	81	33.2
36-45 years	113	46.3
>45 years	47	19.3
Mean	39.11+/-7.07	
Range	24-59	
Parity		
0	184	75.4
1	33	13.5
2	18	7.4
3 and above	10	3.7
Range	0-7	

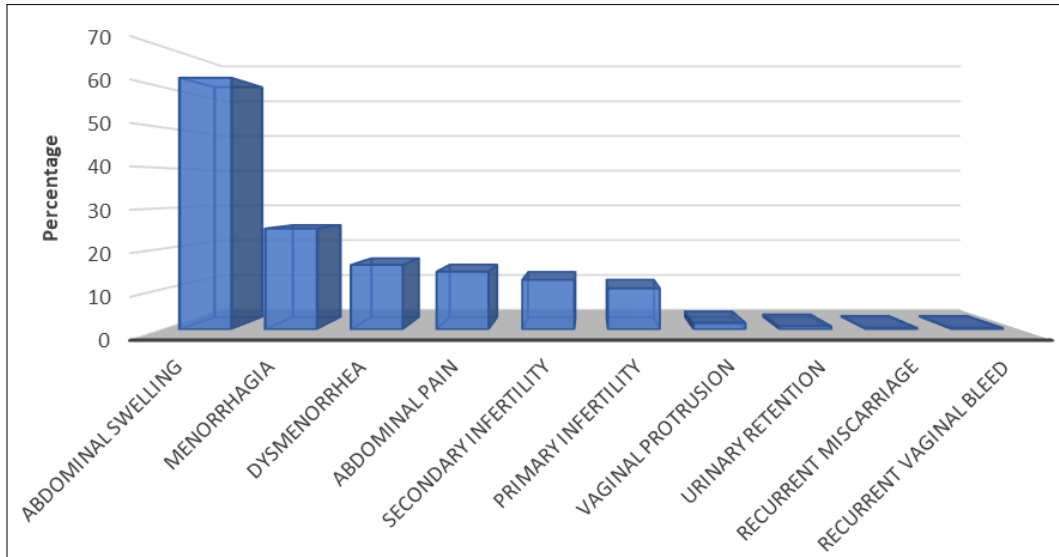


Fig 1: Distribution of clinical presentations

Table 2: Showing the location of the uterine fibroid within the uterus

Location	Frequency (Percentage)
Intramural only	59 (24.2)
Submucous only	7 (2.9)
Subserous only	10 (4.1)
Intramural, subserous and submucous	99 (40.6)
Intramural and submucous	45 (18.4)
Intramural and subserous	20 (8.2)
Subserous and submucous	4 (1.6)

Table 3: Mode of Treatment of Participants

S. N	Treatment Modality	Frequency	Percentage
1	Myomectomy	211	86.5
	Abdominal myomectomy	200	82.0
	Vaginal myomectomy	8	3.3
	Hysteroscopic myomectomy	3	1.2
2	Hysterectomy (total number)	18	7.3
	Subtotal hysterectomy alone	2	0.8
	Subtotal hysterectomy+ bilateral salpingo-oophorectomy	2	0.8
	Total abdominal hysterectomy alone	1	0.4
	Total abdominal hysterectomy+ bilateral salpingo-oophorectomy	13	5.3
3	Conservative	10	4.1
4	Lost to follow-up	5	2.0

Table 4: Metrics of uterine fibroid

Variables	Mean	Minimum	Maximum
Weight of mass(kg)	11.32±3.16	5.5	15
Number of masses	14.4±15.3	1	72
Estimated blood loss(ml)	519.27±266.2	200	2000

Table 5: Postoperative complications of patients who underwent myomectomy

Complication	Frequency	Percentage
Anemia	37.0	15.2
Pyrexia	6.0	2.5
Wound infection	3.0	1.2
Pelvic abscess	1.0	0.4
Acute kidney injury	1.0	0.4
Mortality	1.0	0.4
Total		

Discussion

Our study showed that of all gynaecological cases that presented within the study period, uterine fibroids constituted about

10.66%. This value may not apply to the general population given the asymptomatic presentation of many cases of fibroids and the fact that many patients who have symptoms may not seek orthodox medical attention. This prevalence is similar to that in a study done at Nnewi by Ezeama *et al.* (10.7%) [2] and at Calabar by Emechebe *et al.* (10.2%) [9] only slightly more than that seen in a study done in kano (8.3%) [10] but a less than the prevalences of 13.6%, 21.3% and 42.3% recorded by Obuna *et al.*, Isah *et al.* and Omotoso *et al.*, respectively [11-13].

The peak age of patients in this study was 36-45years, 46.3%, and was in consonance with other reports [14,15]. Nulliparity is strongly linked to development of fibroids, in this study, 75.4% of the participants were nulliparous, which had the highest prevalence of fibroid. This is similar to other local studies by Ezeama *et al.* [2] and Okon *et al.* [16] The least prevalence of fibroids was seen amongst the multiparous women. This trend demonstrates that pregnancy is protective to the development of uterine fibroids.

Review of the presentations of uterine fibroid revealed that abdominal swelling (62.3%) was the most common presenting

symptom. This can be attributed to delay in presentation which is common among our women. This was followed by Menorrhagia (25%), infertility (22.5%), dysmenorrhea (16%), abdominal pain (14.35), vaginal protrusion (1.6%), urinary symptoms (0.8%) and the least were recurrent miscarriage (0.4%) and irregular vaginal bleeding (0.4%). Abdominal mass as the first presenting complaint was also reported by Ornguze *et al.*^[17] in Makurdi, Northcentral Nigeria and Ezeama *et al.*^[2] in Nnewi, southeastern Nigeria. This was in contrast to the report published by Omole-Ohonsi *et al.*^[18] in Kano, in which menorrhagia was reported as the most common presenting symptom. Generally, fibroids are associated with prolonged or heavy menses. Possible reasons for menorrhagia include increase in the surface area of the endometrium, congestion and distortion of surrounding blood vessels, poor uterine contractility, defective development of the endometrium, development and increase in blood flow to the uterus^[19, 20]. The abdominal pain is partly due to the large size of the tumors causing pressure effects and due to fibroid degeneration. Abnormal vaginal bleeding (0.4%), urinary tract symptoms (0.8%), and recurrent miscarriages (0.4%) were all less common modes of presentation. These were similarly reported by Bano *et al.*^[21].

Myomectomy was the most frequently (86.5%) performed among the surgical options. Hysterectomy (7.3%) and vaginal myomectomy (1.2%) were the other surgical options performed, similar to the study by Ezeama *et al.*^[2] A possible explanation for this finding is that majority of the participants were nulliparous with a desire to preserve their reproductive ability. Conservative (medical treatment) was employed in 4.1% of subjects. Laparoscopic myomectomy was performed in 3.3% of the participants which was in contrast to previous local studies in Nnewi^[2, 22]. This may be attributed to the increasing use and evolution of endoscopic procedures in our environment. The mean (SD) weight of the fibroid nodule was 11.322 kg (3.1598) and the mean number of fibroid nodules was 14.4 nodules. This may be related to the late presentation of patients with fibroids in our environment.

The study equally documented that about 3.7% of patients had over 1000ml of estimated blood loss, 20.9% received intraoperative blood transfusion and parenteral use of tranexamic acid (18.9%) and ergometrine (5.3%) during surgery was also reported. These were in a bid to reduce blood loss and related morbidities associated with uterine fibroid.

Anemia (15.2%) and postoperative fever (2.5%) were among the commonest complications observed among our participants which was quite similar to study by Muhammad *et al.*^[10]. Hematoma formed in the dead spaces created during the uterine repair has been implicated in pyrexia occurring longer than 24 hours after surgery. The use of newer interventions, such as uterine artery embolization, can reduce the risk of these complications. Post-operative anemia due to the surgical hemorrhage may be reduced by optimizing the patient prior to surgery, the use of minimal access surgical techniques, injection of intramyometrial vasopressin and the use of tourniquet or myomectomy clamp at surgery. The use of tourniquet applied at the uterine isthmus is the commonly used method in our centre. One case fatality was recorded in this study. This was likely due to another comorbidity's patient presented with.

The limitations of this study included that the study was hospital based and hence the finding may not be applied to the general population. Another limitation is its retrospective design with the associated missing data. This may have also introduced bias in selection, the data may not be an accurate representation of

general population of patients.

Conclusion

Uterine fibroids are a common gynaecological condition in our environment. They usually occur in women of low parity and in their third or fourth decades of life. Surgery is the commonest mode of treatment, with abdominal myomectomy being the most frequent surgical intervention. This study showed that endoscopy is increasingly being employed in the management of fibroid. Pyrexia, anaemia and wound infection ranked as the commonest postoperative morbidities in our study. The use of minimal invasive procedures for its treatment will reduce the postoperative complications. It is advocated that women should be sensitized to report early for assessment of such illnesses.

Acknowledgments: The authors are grateful to the staff of the hospital who helped in generating and preserving the data used in this study.

Funding: There was no specific funds received by the authors for this work.

Contribution to Authorship: Madunatu CM, Okoro CC and Onyejiaka CC participated in conceptualization of the study, designing, manuscript writing and revision. Madunatu CC and Okoro CC participated in data collection and data analysis. Enechukwu CI, Ofojebe CJ, Ani VC, Eleje GU, Mbachu II, Okafor CG, Okoro AD, Okafor CN and Oguejiofor CB contributed to manuscript writing and revision. All authors gave final approval of the manuscript to be published and agreed to be accountable for all aspects of the work.

Disclosure of conflict of interest: We declare that there are no conflict of interest.

Statement of Ethical approval: This study received the approval of the Ethics Committee of Nnamdi Azikiwe University Teaching Hospital Nnewi with the approval number of NAUTH/CS/66/VOL15/VER3/105/2022/050. The study was conducted according to the Helsinki declarations on ethical principles for medical research involving human subjects.

References

1. Okoro CC, Udigwe GO, Eleje GU, Njoku TK, Offor C, Onyejiaka CC, *et al.* Inevitable Caesarean Myomectomy without Blood Transfusion: A Report of Two Cases and Review of the Literature. *J Clin Med Surg.* 2023;3(1):1099.
2. Ezeama C, Ikechebelu J, Obiechina N, Ezeama N. Clinical Presentation of Uterine Fibroids in Nnewi, Nigeria: A 5-year Review. *Ann Med Health Sci Res [Internet].* 2012;2(2):114–8. Available from: PubMed Central
3. Okolo S. Incidence, Aetiology, and Epidemiology of Uterine Fibroids. *Best Pract Res Clin Obstet Gynaecol.* 2008 Aug;22(4):571–88.
4. Ikpeze OC, Nwosu OB. Features of Uterine Fibroids Treated by Abdominal Myomectomy at Nnewi, Nigeria. *J Obstet Gynaecol (Lahore).* 1998;18(6):569–71.
5. Ndububa VI. Uterine Fibroids: Experience with 100 Myomectomies in Orlu, South East Nigeria. *Port Harcourt Med J.* 2016;10:124–129.
6. Solomon CG, Stewart EA. Clinical Practice Uterine Fibroids. *N Engl J Med.* 2015;372:1646–55.
7. Okoro CC, Ikpeze OC, Eleje GU, Udigwe GO, Ezeama CO, Ugboaja JO, *et al.* Association between Serum Vitamin D

- Status and Uterine Leiomyomas: A Case-Control Study. *Obstet Gynecol Sci.* 2023 Oct 17. (Epub ahead of print).
8. McCool WF, Durain D, Davis M. Overview of Latest Evidence on Uterine Fibroids. *Nurs Women's Heal.* 2014;314–332.
 9. Njoku CO, Emechebe CI, Oyama SE, Ekabua JE. A Six-year Retrospective Review of Clinical Presentations and Management Modalities of Uterine Fibroids in University of Calabar Teaching Hospital, Calabar (2007-2012). *Pioneer Med J.* 2014, 4(7).
 10. Muhammad Z, Yakasai I, Abdulrahman A. Surgical Management of Uterine Fibroids at Aminu Kano Teaching Hospital, Kano, Nigeria: A 5-Year Review. *Trop J Obs Gynaecol.* 2013;30(2):113–22.
 11. Obuna JA, Umeora OU, Ejikeme BN, Egwuatu VE. Uterine Fibroids. In *A Tertiary Health Centre South East Nigeria.* *Niger J Med.* 2008 Nov;17(4):447–51.
 12. Isah AD, Adewole N, Agida ET, Omonua KI. A Five-Year Survey of Uterine Fibroids at a Nigerian Tertiary Hospital. *Open J Obstet Gynecol.* 2018;8(5):468-476.
 13. Omotoso AJ, Odusolu PO, Nnoli MA, Lawson E, Irabor G. Review of Leiomyoma in Calabar Nigeria. *Sch J Appl Med Sci (SJAMS).* 2016;4(4A):1106–8.
 14. Lawal Y, Yaro IB, Rabi A, Emmanuel R. Prevalence and Sonographic Patterns of Uterine Fibroids in Northern Nigeria. *New Niger J Clin Res.* 2019;8(13):24–9.
 15. Adawe M, Sezalio M, Kanyesigye H, Kajabwangu R, Okello S, Bajunirwe F, *et al.* Prevalence, Clinical Presentation, and Factors Associated with Uterine Fibroids among Women Attending the Gynaecology Outpatient Department at a Large Referral Hospital in Southwestern Uganda. *East Africa Sci.* 2022 Mar;4(1):48–53.
 16. Okon OA, Eyong E I, Okon OA. Presentation and Surgical Treatment Outcomes of Patients with Uterine Fibroids in a Tertiary Centre, South-South Nigeria. *Afr J Health Sci.* 2021 Apr;33(5):41–8.
 17. Ornguze AA, Abu PO, Maanongun MT, Eka PO. Surgical Management of Uterine Fibroids in Makurdi, Nigeria. *IOSR J Dent Med Sci.* 2019;18:70–4.
 18. Omole-Ohonsi A, Belga F. Surgical Management of Uterine Fibroids at Aminu Kano Teaching Hospital. *Obstet Gynecol Int.* 2012;2012:1–6.
 19. Akinyemi BO, Adewoye BR, Fakoya TA. Uterine Fibroid: A Review. *Niger J Med.* 2004 Oct;13(4):318–29.
 20. Payson M, Leppert P, Segars J. Epidemiology of Myomas. *Obstet Gynecol Clin North Am.* 2006 Mar;33(1):1–11.
 21. Bano S, Aslam I, Azhar T, Manzoor U, Shahzad U, Mustafa K. Fibroid Uterus: Clinical Presentation and Surgical Management in A Tertiary Care Hospital. *Prof Med J.* 2021 Jan;28(01):96–100.
 22. Obiechina NJA, Ugboaja JO, Ezeama CO, Monago EN. Clinical Pattern and Management Outcome of Uterine Fibroids Seen in a Private Specialist Hospital in Southeast Nigeria. *Trop J Med Res.* 2009;13(1):DOI: 10.4314/tjmr.v13i165430.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non-Commercial-Share-Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

How to Cite This Article

Madunatu CN, Okoro CC, Onyejiaka CC, Enechukwu CI, Ofojebe CJ, Ani VC, Eleje GU, Mbachu II, Okafor CG, Okoro AD, Okafor CN, Oguejiofor CB, Eze SC. A 5-year retrospective review of the presentation pattern and management outcomes of uterine fibroids in a Nigerian tertiary Hospital. *International Journal of Clinical Obstetrics and Gynaecology.* Yy;vol(issue):pp.