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ABSUMSAJ

Research Article

PREVALENCE OF UTERINE FIBROIDS AMONG WOMEN PRESENTING AT ABIA STATE UNIVERSITY TEACHING HOSPITAL, ABIA STATE: A FIVE-YEAR REVIEW

Iwuoha EC, [1] Uwaegbulam CE,[2] Eni I, [2] Thomas J [2]

[1]*Department of Community Medicine, Abia State University*

[2]*College of Medicine, Abia State University*

***Corresponding Author**: Dr Iwuoha E.C. driwuoha@gmail.com*

ABSTRACT

Background: Uterine fibroids otherwise known as myoma or leiomyoma are benign, monoclonal tumours of the smooth muscle cells of the human uterus. They are the most common tumours in women of reproductive age and are asymptomatic in at least 50% of affected women with an estimated incidence rate of 20% - 45% among women above the age of 30 years.

The negative impact uterine fibroids symptoms can have on health-related quality of life along with the increased propensity for uterine fibroid among black women, and the burden of increased usage of health care systems for treatment of uterine fibroids makes this chronic and progressive health condition a growing public health concern.

Objectives: The aim of this study was to assess the prevalence of uterine fibroids among women presenting at Abia State University Teaching Hospital (ABSUTH) between 1st of January 2015 to 31st of December 2019.

Materials and methods: A retrospective cross-sectional study carried out based on pre-existing data of patients who presented at ABSUTH over a 5-year period. Data was collected from the folders of patients who attended the gynaecological clinic and analyzed with Statistical Package for Social Sciences (SPSS) version 20.0.

Results: A total of 704 patients attended the gynaecological clinic within this period and 56 were diagnosed with uterine fibroids giving a prevalence of approximately 8%. Majority of the women who presented with uterine fibroids were within the age range of 31-40 years (60.7%). A total of 39 (71.4%) participants were nulliparous with majority of them achieving menarche at age of 14-17 years (82.1%). Majority of the participants in our study presented with abdominal mass/pain, 49 (87.5%) and menorrhagia, 36 (64.3%). Management of patients in this study was mainly through surgery which accounted for 47 (84.0%).

Conclusion: Uterine fibroid is a common gynaecological problem among women of child bearing age. In this study, common presenting complaints were abdominal mass/pain, menorrhagia, vaginal discharge, and history of infertility while nulliparity, and a late age at menarche were the commonest risk factors. The negative impact uterine fibroids symptoms can have on health-related quality of life, and the burden of increased usage of healthcare system for the treatment of uterine fibroids makes this health condition a growing public health concern.

Keywords: PREVELENCE, FIBROID, ABSUTH, ABIA STATE

INTRODUCTION

Uterine fibroids are the commonest benign gynaecological tumour arising from the smooth muscle cells.[1] They are usually firm, well demarcated whorled tumours and have been found to occur in 70-80% of women before or by the onset of menopause. [2] Uterine fibroids are asymptomatic in 50% of cases with the peak incidence of symptoms in women in their 30s and 40s. [3] Many fibroids are asymptomatic, but in 30–40% of cases, they show a variety of symptoms, depending on the location and size. Anemia from heavy uterine bleeding caused by uterine fibroids could be life-threatening. [4] African-American women have more severe symptoms in terms of heavy bleeding and anemia compared to white women.[5]

Abdominal distention or distortion and pelvic pressure on the ureters (causing hydronephrosis) and pelvic blood vessels (particularly pelvic veins) could also interfere with quality of life (QoL).[6] Depending on their location and size, submucous and intramural myomas distorting the uterine cavity can lead to Infertility and recurrent miscarriage.[7]

The role of progesterone in the aetiology of fibroids is through its interaction with its receptors, progesterone receptors-A (PR-A) and PR-B. [8] Leiomyoma's are known to have higher PR content and mRNA levels compared to normal myometrium. [8]

The female reproductive hormones, Oestrogen and Progesterone have been more implicated. Oestrogens and their receptors are reported to exert a great influence on fibroid growth. Several studies found that messenger ribonucleic acid (mRNA) and protein expression levels as well as the content of oestrogen receptor alpha (ER-α) and ER-β are higher in leiomyoma compared to those in normal myometrium. [2] Oestrogen, it is hypothesized, may exert their growth stimulatory effects on leiomyomas intermediated by cytokines, growth factors or apoptosis factors. [9]

The majority of major risk factors for fibroids include those that increase exposure to higher levels of endogenous estrogen. Certain risk factors include early menarche, nulliparity, obesity, and late entry into menopause, and a positive family history of uterine fibroids. The most significant non-modifiable risk factor is African descent, which leads to earlier diagnosis and more severe symptoms. There is a decreased risk for uterine fibroids with increased parity, late menarche,

smoking, and use of oral contraceptives. [10] Race has been shown to be an important epidemiological risk factor for uterine fibroids. It is more common, larger, and symptomatic among black women than white women. [11]

The clinical presentation of fibroids is variable and this depends on the size and number of fibroids and the location of the fibroids within the uterus. However, majority are incidental findings during a clinical or ultrasound examination and hence asymptomatic. [12]Most symptomatic patients present with menstrual disturbances such as menorrhagia, dysmenorrhoea, and intermenstrual bleeding, dyspareunia and monocyclic pelvic pain and pressure symptoms such as sensation of bloatedness, increased urinary frequency and bowel disturbance are also common. It may also impair reproductive functions resulting in reduced fertility, early pregnancy loss, increased preterm labour, and delivery. [13]

According to WHO, 2010 report, fibroid affects between 20-25% of women and close to 235 million women who represent 6.6% of global women population are estimated to have been affected worldwide. [14] While National institute of Health (2013) stated that at least 25%-80% of women suffer from uterine fibroids. [15] Previous studies have also revealed a high prevalence of fibroid among black women than any other race; however, the reason for the high prevalence is still inconclusive as different scholars have offered different explanations. [16]

Furthermore, despite the high prevalence of fibroid among women, its prevention has been very difficult to attain due to several speculations among scholars with regards to diverse preventive and treatment methods. [17] There has been no known scientifically approved preventive measure for this medical condition, hence different methods ranging from traditional to orthodox medicine are being used as preventive measures for fibroid. [14]

Research have indicated that women diagnosed with uterine fibroids are not only impacted by their experience with the physical symptoms associated with uterine fibroid, but they also expressed feelings of hopelessness, emotional distress, concerns related to body image, problems with sexual functions and relationships.[19]

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women than any other race; although the reason for the high prevalence is still inconclusive as different scholars have offered different explanations. [16]

Despite its negative impact on the quality of health amongst women, increased presentation in gynaecological clinics with hysterectomy cases arising from uterine fibroid there is no documented local research assessing the prevalence of uterine fibroids in this facility. This study sought to fill this gap by assessing the prevalence of uterine fibroids among women in Abia State University Teaching Hospital, Aba, Abia State.

MATERIALS AND METHODS

This was a retrospective cross-sectional study carried out at Abia State University Teaching Hospital. Data was collected through detailed assessment of pre-existing hospital records in the folders/case notes of patients included in the study. Information from the folders were extracted using a proforma on sociodemographic characteristics, risk factors, clinical presentation, and management modalities from the selected records. A total of 704 gynaecological folders were retrieved from the study year with 56 of them presenting with uterine fibroids. Data were analyzed using Statistical Package for Social Science (SPSS) software version 20.0.

RESULTS

A total of 704 gynaecological patients presented at Abia State University Teaching Hospital within the period under review, of these number 56 patients were managed for uterine fibroids giving a prevalence of 8%.

Table 1: Socio-demographic characteristics of women who presented with Uterine Fibroids in ABSUTH

VARIABLE	FREQUENCY (N=56)	PERCENTAGE (%)
AGE GROUP (IN YEARS)		
21 - 30	8	14.3
31 – 40	34	60.7
41 - above	14	25.0
OCCUPATION		
Civil Servants	20	35.7
Business	21	37.5
Others	15	26.8

MARITAL STATUS		
Single	23	41.1
Married	33	58.9
Highest level of educational attainment		
Primary	1	1.8
Secondary	16	28.6
Tertiary	39	69.6

Mean age = 39.0±5.4 years

Table 1 above shows the socio-demographic characteristics of women who presented with uterine fibroids. Majority of the study participants (60.7%) were in the 31-40 years' age group with most of them married (58.9%). Majority of the women (69.6%) had tertiary level of education while 21 (37.5%) were into business.

Table 2: Risk factors for uterine fibroids among women in ABSUTH

VARAIABLE	FREQUENCY (N=56)	PERCENTAGE (%)
PARITY		
Parous	16	28.6
Nulliparous	40	71.4
AGE AT MENARCHE		
10-13	10	17.9
14-17	46	82.1
SMOKING		
Yes	0	0.0
No	56	100.0
ALCOHOL INTAKE		
Yes	21	37.5
No	35	62.5
PREVIOUS USE OF ORAL CONTRACEPTIVES		
Yes	6	10.7
No	50	89.3
CAFFEINE INTAKE		
Yes	0	0.0
No	56	100.0

Mean age at menarche = 13.5 years

Table 2 above shows the risk factors of uterine fibroids among the study population. A high proportion of respondents 39 (71.4%) were nulliparous while 28.6% were parous. Majority of the women (82.1%) achieved menarche at the age of 14 – 17 years while 17.9% were aged 10 – 13 years. None of the participants 56 of 56 (100%) had a family history of uterine fibroid while none of the participants smoked.

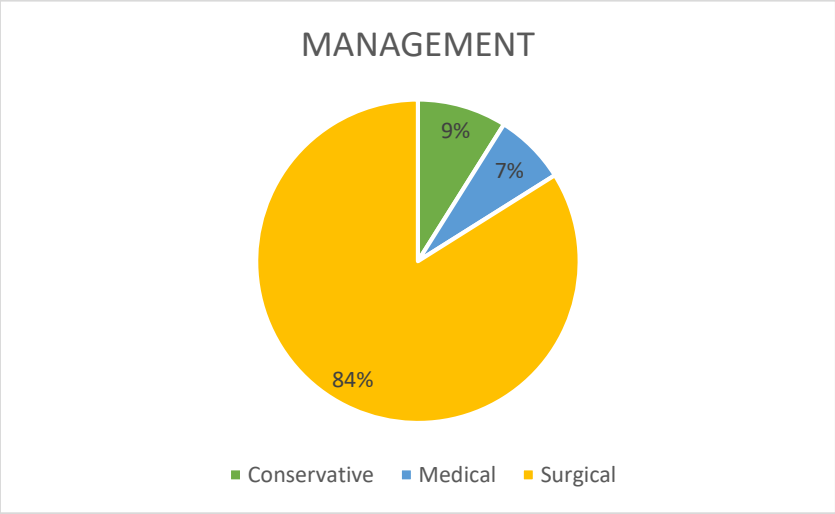
A total of 21 (37.5%) participants took alcohol while 35 (62.5%) participants did not consume alcohol. About 6 (10.7%) of 56 participants had used oral contraceptives in the past while 50 (89.3%) never used oral contraceptives.

Table 3: Clinical presentation of women with uterine fibroids

VARIABLE	FREQUENCY (N=56)	PERCENTAGE (%)
HISTORY OF INFERTILITY		
Yes	16	28.6
No	40	71.4
HISTORY OF SPONTANEOUS ABORTION		
Yes		
No	14	25.0
	42	75.0
ABDOMINAL MASS/PAIN		
Yes	49	87.5
No	7	12.5
MENORRHAGIA		
Yes	36	64.3
No	20	35.7
VAGINAL DISCHARGE		
Yes	19	33.9
No	31	66.1
PRESSURE SYMPTOMS		
Yes	5	8.9
No	51	91.1

Table 3 above is on the clinical presentation of women with uterine fibroids. A total of 16 (28.6%) had history of infertility while 26 (71.4%) did not have any history of infertility, 14 (25.0%) had history of spontaneous abortion, 49 (87.5%) had abdominal mass/pain, 36 (64.3%) experienced menorrhagia, 19 (33.9%) experienced vaginal discharge while 5 (8.9%) had pressure symptoms.

Figure 1: Management Modalities



DISCUSSION

Majority of the participants in this study who presented with uterine fibroids were within the age bracket of 31-40 years (60.7%). This is similar to findings in studies conducted at the Niger Delta University Teaching Hospital, Okolobiri (31-40 years) [20] and University of Abuja Teaching Hospital, Gwagwalada **(**30-39 years). The same age bracket was reported in studies conducted at ISTH, Irrua. [21] However, a study conducted at the Ekiti State University Teaching Hospital (EKSUTH), Ado-Ekiti, South-western Nigeria reported a peak age of 40-49 years. [22]

Findings from this study showed that 33 (58.9%) of the women were married which differs from a study conducted at the Amino Kano Teaching Hospital which reported 75.6%, [23] and ISTH, Irrua which reported 78.9% of participants as being married. The difference in marital status between our study and these studies could be due to the fact that women in those parts of Nigeria get married at an earlier age. However, a study conducted at Niger Delta University Teaching Hospital, Okolobiri reported a higher incidence among the unmarried (52.5%). [20] It can be deduced that reproductive issues among the married women particularly infertility may be a strong association for uterine fibroids. A higher prevalence of uterine fibroids amongst women with

tertiary level of education (69.6%) in our study which is similar to the study conducted at the University of Abuja Teaching Hospital, Gwagwalada which reported about 44% of women with tertiary level of education. This may be attributed to the level of awareness amongst those with a higher level of educational.

The most common risk factor observed in this study was nulliparity 40 (71.4%) which is similar to a study conducted at Nnamdi Azikiwe University Teaching Hospital, Nnewi which reported 77.7% nulliparity as a risk factor. This is in contrast to a study conducted at the Obafemi Awolowo University Teaching Hospital, Ile-Ife which reported a lower percentage (32.1%) for nulliparity as a risk factor. [24] The effect of nulliparity on uterine fibroids may be attributed to continuous secretion of reproductive hormones without cyclic breaks which provides an avenue for growth of uterine fibroids.[25] In this study, a total of 89.3% of the women had no history of previous use of oral contraceptives particularly hormonal contraceptive while 10.7% reported the use of oral contraceptives. This is in contrast with a study conducted by Wong in 2016 which reported the external use of steroids especially oestrogen and progesterone being implicated as risk factors for fibroid development. [26] We did not find, the use of oral contraceptives as a strong association for uterine fibroids.

This study shows a late age at menarche (14-17 years) as a common risk factor for uterine fibroids, this is in contrast to a study conducted by Dignain 2013 which reported an early age of menarche less than 11 years as a strong association for uterine fibroids. [27] This may be attributed to environmental changes and difference in nutritional value of diets consumed. Also, wrong dating by the respondents may be an attributing factor. A study conducted at Manbour, Slovenia showed that lifestyle (smoking, alcohol, caffeine consumption) were not significantly associated with fibroids. This is similar to our finding; which showed that only 21 (37.5%) of the women consumed alcohol while none smoked nor had any prior history of caffeine intake.

Majority of the women in this study presented with abdominal mass/pain 49 (87.5%) followed by menorrhagia (64.3%) which is similar to a study conducted at the Federal Medical Centre, Makurdi which showed abdominal mass as the commonest presentation (58.8%) followed by menorrhagia (52.2%). [8] This is in contrast to a study conducted at the University of Abuja Teaching Hospital, Gwagwalada which showed menorrhagia (38.4%) as the commonest clinical

presentation followed by abdominal mass (34.3%). This study is also in constrast with a study conducted at the Obafemi Awolowo University Teaching Hospital, Ile-ife where the leading presenting complaint is menorrhagia (67.9%) followed by abdominal mass (58.3%). [12] Menorrhagia is also reported as the lead presenting complaint in studies conducted at the Niger Delta University Teaching Hospital, Okolobiri (53.8%), Ekiti State University Teaching Hospital (43.5%), [22] Aminu Kano University Teaching Hospital (53.7%). [28] This may be attributed to late presentation of cases in our environment.

A history of infertility was reported amongst 28.6% of women in our study; this is similar to studies conducted at the Federal Medical Centre, Makurdi (25.2%), [29] Aminu Kano Teaching Hospital (26.8%), and the University of Abuja Teaching Hospital (34.3%). This may be attributed to fibroids obstructing the fallopian tubes and impairing gamete transport or by distortion of the endometrial cavity thus causing abnormal endometrial receptivity. [7] Spontaneous abortions are also reported in 25% of women who presented with uterine fibroids. This is in contrast with studies conducted at the Niger Delta University Teaching Hospital [20] and Federal Medical centre, Makurdi [29] which reported 9.4% and 0.8% respectively.

Three management modalities were reported in this study: conservative, medical, surgical management. Most of the women in the current study 47 (84.0%) were managed surgically, this differs from a study carried out by Okogbo FO in south-western Nigeria where 54.7% of study participants were managed surgically. [30] This may be attributed to late presentation of fibroids which are mostly managed by surgical removal. Our study reported that 7.1% of the patients were managed medically with the use of gonadotropin-releasing hormone agonist which down regulates ovarian production of oestrogen and progesterone and decrease stimulation of hormone receptors thus reducing fibroid size and vascularity. This is similar to a study carried out by Adefisan et al which showed that medical management was employed in a small segment of cases (3.2%). [31] This may be attributed to the size of the fibroids at presentation, the impact of fibroid on the quality of life of the women and the presenting symptoms at the time of presentation.

The current study reported a prevalence of 8%, which is close to values reported at Sckye Hospitals, Akure (6.83%), [8] 12.1% in Northern Nigeria, [11] and 9.5% in South-western Nigeria. [30]

However, this is in contrast with studies conducted in Irrua, Edo State (19.75%), [32] and Enugu (25.9%). [33] The difference in prevalence may be attributed to the asymptomatic nature of most fibroid cases and the fact that some symptomatic patients may not seek medical attention, or may seek help from non-orthodox centers.

CONCLUSION

Uterine fibroid is a common gynaecological problem among women of child bearing age. In this study, common presenting complaints were abdominal mass/pain, menorrhagia, vaginal discharge, and history of infertility while nulliparity, and a late age at menarche were the commonest risk factors. The negative impact uterine fibroids symptoms can have on health-related quality of life, and the burden of increased usage of healthcare system for the treatment of uterine fibroids makes this health condition a growing public health concern. We recommend early presentation by women with uterine fibroids to make for room for early intervention that will improve quality of life and possibility of other management modalities besides surgery.

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