



## Age Prevalence of Leiomyoma Uteri; a Histopathologic Study

E. I. Odokuma<sup>1\*</sup>

<sup>1</sup>Department of Human Anatomy and Cell Biology, Delta State University, Abraka,  
Delta State, Nigeria.

### Author's contribution

This whole work was carried out by author EIO.

Original Research Article

Received 14<sup>th</sup> July 2013  
Accepted 8<sup>th</sup> March 2014  
Published 17<sup>th</sup> April 2014

### ABSTRACT

**Introduction:** This was a retrospective study to demonstrate the age prevalence of uterine fibroid cases diagnosed in a peripheral health facility within a ten year period with a view to improving available demographic health data in Nigeria.

**Results:** Records obtained from the University of Benin Teaching Hospital showed that the commonest age of occurrence within the period was within the 31-40 year interval (44.41%) except in 2003 were 41-50 year interval predominated. While 29.42% occurred in within the fifth decade, 18.48% occurred in the 21-30 age interval. Only 0.87%, 6.34% and 0.48% occurred in the second, sixth and seventh decades of life. There was an observed significant relationship between age and the prevalence of uterine fibroids during the entire period of study ( $p < 0.01$ )  $\chi^2 = 89.54$ ;  $DF = 50$ .

**Conclusion:** Fibroids are common in Africans especially in early adulthood (the working class), the opinion canvassed in this study therefore is that concerned authorities should direct adequate resources towards managing symptomatic patients at a subsidized rates.

*Keywords: Fibroids; Nigerian; age.*

### 1. INTRODUCTION

Leiomyoma uteri also called uterine fibroids, is a benign uterine neoplasm composed of elements of the uterine wall [1]. It has been reported to be the most common tumour in

\*Corresponding author: E-mail: [secretfiles1800@yahoo.com](mailto:secretfiles1800@yahoo.com);

females [2]. This benign monoclonal tumour has been reported to occur in about 20% of females aged over 35 years, majority of which have been observed to be asymptomatic, though a few rare cases have also been observed in pre-pubertal females [3].

Fibroids have been described to be more prevalent in Negroes than Caucasians, constituting over 6% of gynaecologic tumours in some Nigerian cities [4,5]. Although the actual aetiologic basis for developing leiomyoma uteri has not been fully elucidated, several factors especially age, hormonal and genetic factors have been implicated as possible factors in developing this lesion [6].

Fibroids are often asymptomatic and have rarely been reported to be fatal [7]. The presence of symptoms may however reduce the quality of life. Abdominal pain, swelling, abnormal menstrual bleeding and infertility have been some of the common complaints by patients diagnosed with this tumour and these have commonly resulted in surgical intervention with resultant enormous financial health burden [8].

This study was therefore conducted to demonstrate the age prevalence of uterine fibroid cases diagnosed between year 2001 and 2010 (10 years) with a view to improving available demographic health data in Nigeria. It is believed that this study will motivate concerned authorities to direct adequate resources towards managing symptomatic patients at a subsidized rate.

## **2. MATERIALS AND METHOD**

This was a retrospective study conducted at the University of Benin Teaching Hospital, a tertiary health facility which sub serves a considerable part of the south-south region of Nigeria. The period of study was between 2001 and 2010 (ten years). Records were obtained from the archives of the histopathology department and permission was obtained from the institution's ethics and research committee (Protocol number; ADM/E22/A/VOLVII/742). Demographic data (age) was obtained from the records unit of the institution.

## **3. RESULT**

As shown in Table 1, the commonest age of occurrence was within the 31-40 year interval (44.41%). In this study, 29.42% were observed in the 41-50 age interval, while 18.48% occurred in the 21-30 age group. Only 6.34%, 0.87% and 0.48% occurred in the 51-60, 11-20 and 61-70 age intervals respectively. The mean age was 30.5 years while the age range was 16-66 years. There was an observed significant relationship between age and the prevalence of uterine fibroids during the entire period of study { $p < 0.01$  ( $\chi^2 = 89.54$ ;  $DF = 50$ )}.

**Table 1. Showing the age (interval of 10 years) versus the frequency of fibroids within each year of the study**

Age interval	Frequency										Total	
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	$\Sigma f$	%
11-20		1	1			2	2	3	2		11	0.87%
21-30	9	7	24	13	16	27	27	28	50	32	233	18.48%
31-40	38	18	29	22	38	82	71	79	93	90	560	44.41%
41-50	28	6	42	12	36	53	52	44	54	44	371	29.42%
51-60	18	1	6	3	11	16	3	8	7	7	80	6.34%
61-70			1		2			3			6	0.48%
Total	93	33	103	50	103	180	155	165	206	173	1261	100.00%

#### **4. DISCUSSION**

It has previously been noted that fibroids were common in females of child bearing ages in the western part of Nigeria [9] as was observed in this study where most cases were within the third and 4<sup>th</sup> decade of life [10]. This is also the period of maximum oestrogen secretion which has been speculated to be associated with fibroids [10]. The observed low prevalence in pre pubertal and post menopausal females may therefore be a consequence of relatively low oestrogen levels during these periods [11].

Several studies have documented an increased incidence of uterine leiomyoma in women of African descent [12-14]. A reported 3-9 times increased incidence of uterine fibroids, age for age when compared with Caucasians, has been attributed to genetic and racial factors [12]. Uterine fibroids have been documented to occur at about 30 years of age and becomes symptomatic at about 35-45 years of age [7]. This could explain the age prevalence in this study in which all the cases for this study were samples obtained from the gynaecology section of the hospital following surgery most of which must have been symptomatic at presentation.

The observation in this study is that most cases occurred during the most productive period of female life with resultant increase in financial burden to affected individuals, their families, the health sector and the entire country. Man hours that would have been spent in more productive ventures are expended in managing fibroids which is sometimes associated with complications resulting in fatality, albeit rare [7].

For this reason, it is advised that more resources be directed at finding out the actual cause of this health scourge in a bid to developing appropriate treatment to prevent and if possible eliminate it.

#### **5. CONCLUSION**

This study was conducted to demonstrate the age prevalence of uterine fibroid cases diagnosed between year 2001 and 2010 (10 years) in a peripheral health facility. The commonest age of occurrence was within the 31-40 year interval. The mean age was 30.5 years while the age range was 16-66 years. It is believed that this study will motivate concerned authorities to direct adequate resources towards managing symptomatic patients at subsidized rates.

#### **COMPETING INTERESTS**

The author declares that there are no competing interests.

#### **REFERENCES**

1. Ross JW. The uterine fibroid. *J. of Nat. Med. Assos.* 1995;1(45):45-48.
2. Parker WH. Uterine myoma: Management fertility and sterility. 2007;80(2):255-271.
3. Al-tacher H, Ferghuarson RG. Management of uterine fibroids. *British J. Hosp. Med.* 1993;50:133-136.
4. Emembolu JO. Uterine fibromyomata, presentation and management in Northern Nigeria. *Int. J. Gyn. Obs.* 1987;25:413-416.

5. Ogunniyi SO, Fasubaa O. Uterine fibromyomata in Ilesha, Nigeria. *Nig. Med. Pract.* 1990;19:93-95.
6. Anate M. Uterine fibroids in Federal Medical Center, Lokoja: A five year review 2002-2006. *The Nig. Clin. Review J.* 2007;1:5-12.
7. Okogbo FO, et al. Uterine leiomyomata in South-western Nigeria: A clinical study of presentations and management outcome. *Afr. Health Sci.* 2011;11(2):271-278.
8. Omu AE, Ihejerika IJ, Tabowei G. Management of uterine fibroids at UBTH. *Tropical Doctor.* 1984;14:82-85.
9. Newbold RR, et al. Advances in uterine leiomyomas research, conference overview, summary and future research recommendations. *Environ. Health Perspect.* 2001;108(5):769-773.
10. Tindal VR. Tumours of the corpus uteri. In: *Jefcoate's Principles of Gyn.* 5<sup>th</sup> ed. London: Butterworths. 1987;417-432.
11. Varma TR. Diseases of the uterus. In: *Clinical Gyn.* London: Edward Arnold Publishers. 1991;457-469.
12. Lurie S, Piper I, Woliovieth I, Glezerman M. Age-related prevalence of Sonographically confirmed Uterine Myomas. *J. of Obs. and Gyn.* 2005;25:42-44.
13. Lethaby A, Vollenhoven B. Fibroids *American Family Physician.* 2005;71:1753-1756.
14. Marino JL, Eskenazi B, Warner M, Samuels S, Vercellini P, Gavoni N, et al. Uterine leiomyomas and menstrual cycle characteristics in a population based cohort study. *Human Reproduction.* 2004;49:2350-2355.

---

© 2014 Odokuma; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*

*The peer review history for this paper can be accessed here:*  
<http://www.sciencedomain.org/review-history.php?iid=492&id=5&aid=4336>