

AGE PREVALENCE OF UTERINE FIBROID IN SOUTH WESTERN NIGERIA

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ABSTRACT

Aim: Fibroid is said to be one of the causes of pain in the pelvic area and infertility amongst women of childbearing ages. The aim of this study was to determine fibroid distribution by age group among women of childbearing age in South Western Nigeria.

Methods: A total of 500 uterine samples selected randomly from women of childbearing ages diagnosed with fibroids in some hospitals in South West Nigeria were used in this study. All patients had maternal and paternal origins of Western Nigeria. They were grouped according to age and year of diagnosis of fibroids. The tissues were processed by the paraffin wax technique and sections cut at 4 μ , stained with heamatoxylin and eosin and examined with a light microscope.

Results: Four patients were found to have fibroids in the 16-25 years age group, 150 were in the 26-30 age group, 250 were in the 36-45 age group, while 96 were above 45 years of age. There is a gradual rise in the incidence of fibroids at 25years followed by a gradual decline beginning from 45 years of age.

Conclusion: The peak age group for fibroids in South Western Nigeria seems to be from 36 to 45 years.

Key Words: Fibriod, infertility, Childbearing age

INTRODUCTION

A fibroid is a tumour of muscle tissue that grows in the wall of the uterus in some women. Fibroids can cause problems such as heavy menstrual periods and pain in the pelvic area. In some women, fibroids can cause infertility and tendency towards miscarriage. Fibroids occur as single or multiple tumours in the uterus and can be very small or very big. In some cases they become extremely large. The incidence of

uterine fibroids increases with age in the child bearing age. Most tumours are asymptomatic and may be diagnosed accidentally. They are benign and are the most common gynaecologic tumours in women of reproductive age (Salman and Davis, 2010). They are rare before menarche and gradually disappear after menopause (Englund et al., 1998). It is thought that estrogens promote their growth (Buttram and Reiter, 1981; Marsh and Bulun, 2006). A

rapid, safe, and cost-effective means of evaluating the size, number, and location of fibroids is by means of ultrasound (Dueholm et al., 2002). Ultrasound can be used in the diagnosis of fibroids of up to 4 to 5 mm in diameter (Hurley, 1998), although not very useful for multiple fibroids, because of acoustic shadowing. MRI has been shown to be the most reliable method of evaluation when compared with ultrasound, hysterosonography, and hysteroscopy, with 100% sensitivity and 91% specificity (Dueholm et al., 2002). A major disadvantage of MRI is the high cost and the fact that it is not readily available in some hospitals (McLucas, 2008), particularly those in resource poor settings. Donnez and Jadoul, (2002) reported that between 5% and 10% of women presenting with infertility were found to have one or multiple fibroids. Reproductive success seems to be related to the location of fibroid. Its growth is dependent on certain ovarian steroids. The cumulative incidence of tumours at age 50 years is quite variable and has been shown to be greater than 80% for African American women and about 70% for Caucasian women (Day et al., 2003). Patients with fibroids may experience pelvic pressure, abnormal uterine bleeding, and recurrent pregnancy loss (Parker, 2007). Surgical removal is the primary treatment option for symptomatic fibroids (Merrill, 2008). The involvement of 17 β -estradiol in the development of fibroids has been established. Animal and cell culture models suggest that estrogen is the primary growth promoter of fibroids (Porter et al., 1995), but the effect of progesterone on fibroids has not been established in research models. Proliferation markers such as Ki67 and proliferating cell

nuclear antigen (PCNA) are highest in uterine leiomyomata in the luteal/secretory phase (Lamminen et al., 1992). Treatment options include hysterectomy, myomectomy, uterine artery embolization, myolysis, and medical therapy (Lefebvre et al., 2003).

MATERIALS AND METHODS

A total of 500 random uterine samples from women of child bearing age diagnosed for fibroids in some hospitals in South West Nigeria were used in this study. All patients used in this study had maternal and paternal origins of Western Nigeria. They were grouped according to age and year of diagnosis of the condition. The tissues were processed by the paraffin wax technique through alcohol, xylene and paraffin wax. Tissues were subsequently embedded in paraffin wax and sections were cut at 4 μ with a Rotary microtome, stained with hematoxylin and eosin and examined with a light microscope at X100 and X400. The study was from 2010 to 2015. All analyses were done with social package for social science (SPSS).

RESULTS

In the 6 years (2010 to 2015) of the study, 4 patients were found to have fibroids in the 16-25 years age group, 150 were in the age 26-30 years age group, 250 were in the age 36-45 years age group, while 96 were in the age group 45 years and above as presented in the table and figure below. There is a gradual rise in the incidence of fibroids at 25 years followed by a gradual decline beginning from 45 years of age. The peak age group for fibroid is from 36 to 45 years.

Table 1: Frequency of fibroid in Western Nigeria from 2010 to 2015

Year	Age group (years)			
	16-25	26-35	36-45	Above 45
2010	0	17	25	7
2011	0	25	37	17
2012	1	27	44	15
2013	1	23	49	19
2014	2	28	50	15
2015	0	30	45	17
Total	4	150	250	96

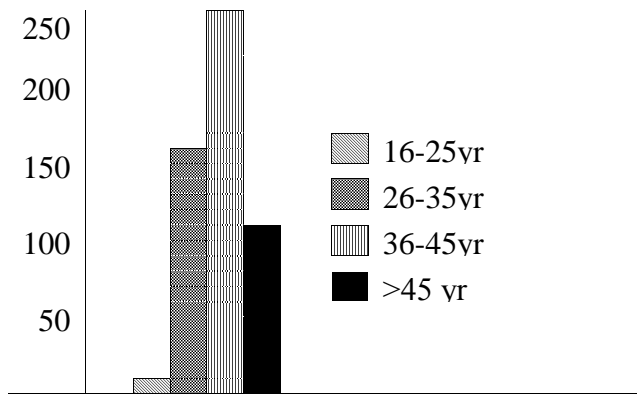


Fig 1. Age range of women with fibroids

DISCUSSION

Several women develop uterine fibroids (i.e., leiomyomas) as they grow older. It has been reported that 5.4 to 77% of women have uterine fibroid tumors, depending on the population studied and the method of diagnosis (Lurie et al., 2005; Lethaby and Vollenhoven, 2005). This present research revealed that the most prevalent age range for fibroid among women of South Western Nigerian is 36 to 45 years. This finding is similar to the result obtained from Eastern part of Nigeria, where Ezeama et al., (2012) reported a prevalent age group of 35 to 39 years with 27% of fibroid. Our result is also similar to the result of Muhammad et al., (2013) in Kano, Northern Nigeria who reported a prevalent age group of 35-39 having 48.1% of the total fibroid in that study. Lurie et al., (2005) stated that the prevalence of ultrasound-identified tumors ranged from 4% in women 20 to 30 years of age to 11 to 18% in women 30 to 40 years of age and 33% in women 40 to 60 years of age in Israel. Guidelines have been created to assist patients and physicians in choosing the appropriate management options for fibroids (Lefebvre et al., 2003), which enables optimal management of symptomatic uterine fibroid tumors. There are a number of treatment options which include surgery, uterine artery embolization, ablative techniques, and medical management. The incidence of uterine fibroid tumors increases as women grow older. Many tumours are asymptomatic and are usually diagnosed incidentally. Fibroids are associated with menorrhagia, pelvic pain, pelvic or urinary obstructive symptoms, infertility, and loss of pregnancy. Although, transvaginal ultrasonography, magnetic resonance imaging, sonohysterography, and hysteroscopy are

methods that are used to evaluate the size and position of tumours, the present study was on histologically confirmed cases of fibroids. Hysterectomy, myomectomy, uterine artery embolization, myolysis, and medical therapy are some of the treatment options. It is important to determine the presence and severity of symptoms, the patient's desire for definitive treatment, the desire to preserve childbearing capacity, the importance of uterine preservation, infertility related to uterine cavity distortions, and previous pregnancy complications related to fibroid tumors before treatment options can be chosen. Gonadotropin-releasing hormone (GnRH) agonists are the most used therapy for medical management, causing amenorrhea and a rapid reduction in the size of the tumor, but the GnRH have significant side effects resulting from hypoestrogenism (e.g., hot flashes, vaginal dryness and bone demineralization). GnRH agonists are not appropriate for long-term use, therefore, it is best suited for women in the perimenopausal or preoperative periods (Rackow and Arici, 2006).

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