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Original Research Article

Epidemiological aspects of uterine myomas among nulligest women at the general reference hospital of Panzi in Democratic Republic of the Congo

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ABSTRACT

Background: Myomas appear early in young women. The objective of this study was to evaluate the frequency of uterine myomas among nulligest women screened at the Panzi Hospital in South Kivu.
Methods: A cross-sectional study was conducted among women aged 20-35 years during the period from 01 August 2018 to 01 August 2019. Women were recruited for screening after their informed consent. Informed consent was sought prior to participation in the study. The main data collection tools were the survey questionnaire. An individual survey questionnaire was used for data collection, laboratory records and trans-abdominal ultrasound. Descriptive statistics were calculated.
Results: The median age of the women was 25 years. Positive myotomy was noted in 45.9% of cases. Submucosal and subperitoneal localization was predominant (48.6%). Young, unmarried, overweight women were the most common. The mean age of the menarche was 11.83±1.48 years. The consumption of red meat, green vegetables and alcohol was more noted. Exposure to the sun and wearing half-covered clothing were also noted. Abdominal and lumbar pain were the main symptoms observed. The majority used lightening products.
Conclusions: The study notes the early appearance of uterine myomas among women aged 20-35 years in our environment. A mass evaluation and screening of this population is necessary to establish prevention and the best management.

Keywords: Epidemiology, Myomas, Nulligestes, Panzi hospital

INTRODUCTION

Myomas are the most common benign tumors in gynecology and affect 20-50% of women of childbearing age its impact on fertility is controversial in a literature difficult to analyze.[1] They grow under the influence of several factors in particular, hormones through growth factors and vitamin D is topical. It is extremely important since 20% of women in their 30s and 50% of women in their 50s are carriers of myomas.[1] This pathology affects women between the ages of 30 and 50, but with hormone replacement therapy, its frequency increases after the age of 50. Estro-progestogens do not seem to increase the occurrence of a myoma and instead there is a decrease in the risk. Black women are affected 3 to 4 times more often, and clinically, their frequency increases.[1,2] These factors do not exactly explain the risk of myoma occurrence and its almost impossible prevention, hence their association and the search for potential new factors associated with

them that contribute to the development and progression of myomas.[2,3] Research has shown in vitro that vitamin D [(25 (OH) D] can inhibit the proliferation of uterine leiomyomas.[4-7] The active metabolite of vitamin D has been shown to inhibit cell proliferation and extracellular matrix production in fibrous tissue culture and to reduce the volume of myomas in Esker rats and prevent the growth of human fibroid cells in laboratory cultures.

Studies show that vitamin D deficiency is one of the predictive factors for the occurrence of uterine myoma, and that a large part of the population is deficient, especially the elderly.[7,8] In the literature, few studies have focused on vitamin D in young people specifically aged 20 to 35 years. Recent epidemiological studies have shown an association between levels of exposure to risk factors and the occurrence of myoma.[8,9] Vitamin D deficiency is a hot topic because of its globalization, affecting more than a billion people worldwide and its consequences such as the occurrence of myomas. However, there is little research in Africa, with only a few groups working on the problem, and it is not possible to get a true picture of the problem.

The objective of this study is to evaluate the frequency of uterine fibroids among women aged 20-35 years in order to contribute to the prevention of early onset of uterine fibroids in nulligestes between 20 and 35 years in our community.

METHODS

We conducted a cross-sectional study at the General Reference Hospital of Panzi in South Kivu. This study was conducted among nulligest women from 01 August 2017 to 01 August 2019. The selection of the 412-nulligest women was occasional after their informed consent. The women participating in the study were sensitized at the gynecology and obstetrics department of the Panzi hospital. We received the women's agreement to the collection and completion of the survey questionnaire. Ultrasound scans were performed by the laboratory of Panzi hospital. A trans-abdominal ultrasound was done systematically. The analysis of the collected data was carried out by statistical package for the social sciences (SPSS) 23 software. The quantitative variables were re-summarized by the median and their range of deviation and the qualitative variables were presented in the form of frequency tables. Ethical principles were respected throughout this study. The anonymity and confidentiality of the data collected were strictly respected.

RESULTS

The median age was 25 (20-35) years and 60% of the nulligest women were between 20 and 25 years old, 63.6% came from the health area of Ibanda, (90.3)% were single, (65.2)% were university students, (97.3)% had an average standard of living, (45.4)% were Catholics, (44.2)% were overweight (Table 1).

Table 1: General characteristics of study population.

Parameters	n (%)
Age range (years)	
20-25	247 (60.0)
26-30	112 (27.2)
31-35	53 (12.9)
Median (min-max)	25 (20.35)
Place of origin	
Bagira	14 (3.4)
Ibanda	262 (63.6)
Kadutu	33 (8.0)
Out of town	103 (25.0)
Civil status	
Single	372 (90.3)
Married	40 (9.7)
Education status	
Primary	6 (1.5)
Secondary	137 (33.3)
University	269 (65.2)
Standard of living	
Low	5 (1.2)
Average	401 (97.3)
High	6 (1.5)
Religion	
Muslim	14 (3.4)
Catholic	187 (45.4)
Protestant	176 (42.7)
Others	35 (8.5)
Body mass index	
Lean (<18.5)	3 (0.7)
Normal (18.5–24.9)	195 (47.3)
Overweight (25–29.9)	182 (44.2)
Moderate obesity (30-34.9)	30 (7.3)
Morbid obesity (>40)	2 (0.5)

Table 2: History of uterine myomas among nulligestes.

Variables	n (%)
History of uterine myomas	
No	223 (54.1)
Yes	189 (45.9)
Previous history (n=189)	
Familiar 1st degree	162 (85.8)
Personal	11 (5.8)
Familiar 1st degree+personal	16 (8.4)
Age of menarch (years)	
Means±standard deviation	11.83±1.48
Cycle abnormalities	
None	170 (41.3)
Polymenorrhea	7 (1.7)
Dysmmenorrhea	177 (43.0)
Dysmenorrhea+polymenorrhea	57 (13.8)
Spaniomenorrhea	1 (0.2)

We note the history of uterine myomas in 45.9% of women, among them, 162 women (85.8%) had a first-degree family history. The mean age of menarch was 11.83±1.48 years (Table 2).

The results of the Table 3 show that the diets of the nulligest women were dominated by the consumption of red meat, green vegetables and alcohol. Concerning the dress code, we noted that most of the women wore partially covered clothing. Most women spent less than one hour in the sun. Forty-one percent of the women used lightening products. 36.9% had a fair skin tone and 32% had a black skin tone (Table 3).

Pelvic pain (51.2%), low back pain (49.8%) and bleeding between periods among (14.6%) women were noted in first place (Table 4). Positive myotomy was noted in 189 women or 45.9%. Moreover, in 48.6% the myomas were localized submucosal and subperitoneal (Table 5).

Table 3: Diet, clothing and sun exposure among nulligests.

Variables	n (%)
Diet	
Red meat consumption	317 (76.9)
Green vegetable consumption	289 (70.1)
Dairy products	140 (34.0)
Alcohol intake	223 (54.1)
Fish consumption	174 (42.2)
Egg consumption	71 (17.2)
Dress code	
Fully hedged	143 (34.7)
Partially hedged	260 (63.1)
Equipped clothing	9 (2.2)
Time of exposure to the run (hour)	
<1	358 (86.8)
>1	54 (13.1)
Use of lightening products	
No	242 (58.7)
Yes	170 (41.3)
Body complexion	
Black	132 (32.0)
Clear	152 (36.9)
Dark black	128 (31.1)

Table 4: Symptoms in nulligest women.

Variables	n (%)
Symptoms	
Lumbar pain	205 (49.8)
Pelvic pain	211 (51.2)
Bleeding between periods	60 (14.6)
Feeling of abdominall mass	1 (0.2)
Sensation of vaginal mass	1 (0.2)
Urinary difficulty	1 (0.2)

Table 5: Pelvic ultrasound results for myoma and their location.

Variables	n (%)
Pelvic ultrasound for myoma	
Negative	223 (54.1)
Positive	189 (45.9)
Location of the myoma (n=189)	
Submucous	92 (48.6)
Subperitoneal	92 (48.6)
Subserous	2 (1.0)
Cervical interstitial	1 (0.5)
Intracavitary	1 (0.5)
Intracorporal	1 (0.55)

DISCUSSION

The results of our study showed that the frequency of uterine myomas was 45.9% defined by positive myotomy among women. In addition, in 48.6% the myomas were localized submucosal and subperitoneal. Our results do not corroborate those found in France by Fernandez et al in 2014, in a sample of 2498 women 220 women had presented a uterine fibroid, a prevalence of 8.8%.[10]

This difference can be explained by the level of sample size between these two studies. Our results also differ from those of Djibril in 2008, which found a 32% frequency of uterine fibroids and interstitial localization was the most frequent with 44%.[11]

In our Panzi series, we noted that 44.2% of women with no weight were overweight. These results are similar to those found by Marshall et al who found a significant association between obesity and myoma growth.[8]

In our study, we found that 45.9% of the women had a history of uterine myomas, among them, 162 women or 85.8% had a first-degree family history. Our results are consistent with those found by Vikhlyaeva et al, who demonstrated a family predisposition and showed that fibroids were twice as frequent when there was a family history of fibroids in the first degree, and in the series of Lumbiganon et al, who showed that the risk is four times higher when there is a family history of fibroids.[9,12]

In our series, we found that the mean age of menarche was 11.83±1.48 years. These results are consistent with the literature, as it has been shown that the age of menarche or first menstrual period is a factor significantly associated with fibroids younger than 12 years.[7] Our results are similar to those of Djibril in 2008, who noted that 46.88% of women had their periods stopped before the age of 15 years.[9]

In our study, we noted pelvic pain (51.2%), lumbar pain (49.8%), and bleeding between periods among (14.6%) women. Compared to the French series of Fernandez et al in 2014, one hundred and sixty-three women (73.7%) had

bleeding, whether or not associated with pain, and 58 (26.3%) had isolated pain. 110 women (49.7%) rated their pain as severe or extremely severe and 178 (80.6%) felt embarrassed in their daily lives.[10] These results are similar to those found in our Panzi series despite some differences in the percentages.

Our results are almost similar to those found by Djibril in 2008, who had noted pelvic pain in 55 women or 27.5%, menorrhagia in 34 women 17% menorrhagia.[11] Contrary to our results, in the series of Cham et al in 2013 in Lubumbashi, the risk of finding uterine fibroids is five times lower in women under 30 years old.[7]

Limitations

As the design of the study is descriptive, it was difficult to identify the factors associated with the early onset of myomas in nulligest patients.

CONCLUSION

The frequency of uterine myomas in nulliparous women aged 20-35 years is very high in our community, 45.9% in a young population. Forty-eight percent of the myomas were localized submucosal and subperitoneal. We noted that the majority of the women were still single, sixty-five percent were academics and forty-four percent were overweight. The history of uterine myomas was noted in 45.9% of the women, among whom 85.8% had a first-degree family history. The diets of nulligest women were dominated by red meat consumption, green vegetables and alcohol consumption. We noted that most of the women wore their clothes completely covered and spent less than one hour in the sun. We also noted pelvic pain, lower back pain and bleeding between periods among women with no menstrual periods.

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