

Prevalence of Uterine Fibroid among Adolescent School Girls In Calabar Nigeria

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Abstract: Uterine fibroid, also referred to as leiomyoma is the most common benign tumour of the uterus occurring in women but reported as rare in the adolescent. Lately, there has been an increase in reported cases among teenagers. This study aims at documenting the prevalence of uterine fibroid among adolescent schoolgirls in Calabar and recommending timely specialist advice and care where the need arises. Adolescent secondary schoolgirls aged 10 to 19 years whose parents or guardians gave consent had pelvic ultrasound scan done. A prevalence of 0.05% was calculated. It is concluded that the prevalence of uterine fibroid is low among adolescent schoolgirls in Calabar.

Keyword-Adolescent, Prevalence, Schoolgirls, Uterine Fibroid

I. Introduction

The World Health Organisation (WHO) identifies adolescents as young people between the ages of 10 and 19 years and are often thought of as a healthy group but many serious diseases in adulthood have their roots in adolescence [1].

The very word “fibroid” even though incidentally diagnosed during ultrasound examination will stir up a storm of anxieties, more so in a young girl who is just starting her reproductive life. It is an unlikely diagnosis in an adolescent but since the tumour depends on ovarian steroid hormones for its growth, ovarian activation at adolescence may trigger its growth in girls who are predisposed [2].

This study aims at documenting the prevalence of uterine fibroid among adolescent schoolgirls in Calabar and to enlighten them on how to seek timely specialist advice and care when the need arises.

II. Materials And Method

There are 24 public secondary schools in Calabar with a total adolescent girls population of 15,246. Of these, 14 schools with a total of 7,623 adolescent girls aged 10-19 years gave permission to give an enlightenment talk on Uterine Fibroid to students as an after school event and to parents during the Parent Teacher Association (PTA) meetings. The purpose and the methodology of the study were also explained. The girls were given informational letters and consent forms that clearly stated that students' participation was completely voluntary. Trans abdominal ultrasound scan of the pelvis using standard technique was then done on 4,347 (57%) girls who turned in duly signed consent forms from parents and guardians. Ethical approval was obtained from the Health Research Ethics Committee, University Of Calabar Teaching Hospital, Nigeria. (Protocol Assigned No UCTH/HREC/33/170). The Study Spanned A Period of 9 Months.

III. Results

Mean age was 14.36 years with an age range of 10 to 19 years. Mode was 16 yrs. 2 Sonograms from girls (aged 14 and 15 years) showed rounded, well defined, solitary, hypo echoic masses, located at the anterior wall of the body of uterus on both longitudinal and transverse scan. Each mass was seen just below the serosa of the uterus and had widest transverse diameter of 1.02cm and 1.4cm. The adnexa and Pouch Of Douglas were nil of note. Findings are suggestive of sub serous uterine fibroids. Prevalence = $\frac{2}{4,347} \times 100 = 0.05\%$

IV. Discussion

Myomas are an enormous health care concern and despite the prevalence, the research is underfunded when compared with other non-malignant diseases. This may be due to the fact that many women are asymptomatic and myomas almost always cause morbidity rather than mortality [3]. Uterine myomas are less common in adolescents than in adults but they should be considered in adolescent females who present with pelvic mass, abdominal pain or abnormal uterine bleeding. Diagnosis is based on pelvic and ultrasound examinations while management is observation for small lesions and surgery for large fibroids [4].

According to Mostafa et al, who described 22 adolescents with uterine leiomyoma, the diagnosis and treatment is more challenging in younger patients because considerations and precautions have to be taken when treatment is surgical. This is to minimize the risk of fertility impairment or conversion to hysterectomy, which are both catastrophic in this age group [5].

This study reports only 2 cases of ultrasound findings suggestive of small sized uterine fibroids. The girls and their parents were advised on follow up and to report any associated symptoms to a Gynaecologist for appropriate medical care.

Aetiology Of leiomyoma is generally unknown but many factors are recognised as growth promoters. Sex steroids, especially oestrogen have been the most frequently studied.

Race also plays a role as women of African ancestry develop fibroids at a younger age in contrast to Caucasian women.[3].

Marshall et al reported that the risk of uterine leiomyomata was significantly inversely associated with age at menarche [6]. All the girls in this study were Africans but none gave a history of menarche earlier than 10 years. Child sexual abuse was an independent risk factor for uterine leiomyoma. The researchers report that the more often children were sexually abused, the higher the risk of developing uterine fibroids. In a prepared statement, Dr Wise noted that psychological stress might influence the biosynthesis or metabolism of sex steroid hormone that are considered to be involved in fibroid development and growth. Child sexual abuse is linked to sexually transmitted infection that could also increase Uterine fibroid [7]. No history of sexual abuse was reported in this study.

An epidemiological survey estimated a prevalence of 0.4% of uterine fibroids among teenagers and stated that most of the girls with fibroids were probably asymptomatic[9].

On the other hand, a prevalence of 0.05% was calculated in this study but the two girls with the uterine masses seen on ultrasound scan were also asymptomatic.

IV. Conclusion

We conclude that the prevalence of uterine fibroid is low among adolescent schoolgirls in Calabar, Nigeria. This may be due to the fact that our study was limited to adolescents in public secondary schools only. It is therefore suggested that future studies on adolescent girls should include all categories of schools in both urban and rural towns for a more comprehensive representation.

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References

- [1] WHO | Adolescent Health-----World Health Organisation.
- [2] Guin Gita, Khare Shashi, Fibroid Uterus in the Adolescent Girls, in Dutta Dilip Kumar, Olyai Roza, (Ed), *Recent Advances in Adolescent Health*, (New Delhi: Jaypee Medical Ltd; 2011) 124-129.
- [3] WH Parker. Etiology, Symptomatology and Diagnosis of Uterine Myomas. *Fertil Steril*, 87(4), 2007, 725-36.
- [4] Fields KR, Neinsten LS. Uterine Myomas in Adolescent; Case Reports and a Review of the Literature. *J Pediatr Adolesc Gynecol*, 9(4) 1996, 195-198.
- [5] Mostafa M. Khordry, Ahmed H. Abd-ellah, Abdel Aziz E Tamman, Sherif A.M. Shazly, Hossam T. Salem. Uterine Leiomyomas in Adolescents: A Diagnostic and Treatment Dilemma-A Case Series. *J Gynecol Surg*. 31(6), 2015, 357-361.
- [6] Marshall LM, Spiegelman D, Goldman MB, Manson JE, Colditz GA, Barbieri RL, Stampfer MJ, et al. A Prospective Study of Reproductive Factors and Oral Contraceptive Use in Relation to the Risk of Uterine Leiomyomata. *Fertil Steril*. 70(3), Sept 1998, 432-439.
- [7] Lauren A. Wise, Julie Palmer, Lynn Rosenberg. Lifetime Abuse Victimization and Risk of Uterine Leiomyomata in Black Women. *Am J Obstet Gynecol*. 208(4): 2013, 272.
- [8] Rafael Mendel Moroni, Carolina Vieira, Rui Alberto Ferriani, Rosana Maria dos Reis, Antonio Alberto Nogueira, Luiz Gustavo Brito. Presentation and Treatment of Uterine Leiomyoma in Adolescence: A Systematic Review. *BMC Womens Health*. 2015; 15: 4.