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Original Research Article

Frequency of Primary Infertility in Women Suffering From Fibroid Uterus

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Abstract: ***Objective*****:** To determine the frequency of primary infertility in women suffering from fibroid uterus. ***Study Design*****:** Cross-sectional study. ***Setting and Duration*****:** Outpatient department of gynecology and obstetrics of Bolan Medical Complex Hospital Quetta from 1st Jan 2018 to 30th Jun 2018. ***Sample size*****:** The calculated sample size is 203 patients, with 95% confidence level and absolute precision of 3%, taking percentage of infertility 5% with fibroid uterus. ***Sampling technique*****:** Non-probability consecutive sampling. ***Results*****:** A total of two hundred and three women presented with fibroid uterus were selected during study period through out patient department of Bolan Medical Complex Hospital Quetta. 12.8% were between 18-25 years, 45.3% were between 26-32 years and 41.9% were between 33 to 40 years of age. Out of 203 patients only 9.9% had infertility, and remaining 90.1% were enjoying healthy reproductive life. In 63% cases there were multiple and in 36.9% of cases were single fibroids. ***Conclusion*****:** In our study only 9.9% patients with fibroid uterus had primary infertility. The remaining patients had no issue with conception having fibroids. Having fibroid uterus may be only one reason of infertility, many other aspects need to be considered while treating infertility.

Keywords: Fibroid Uterus, Infertility, Menorrhagia, Submucous fibroids, Reproduction.

INTRODUCTION

Uterine fibroids (Leiomyoma) are the benign tumors of smooth muscles occurring anywhere in the body, principally in the uterus. Uterine cavity leiomyomas are indeed the most common pathological growth in the female genital tract, affecting about 40% of female population, measuring beyond the age of 50 [1, 2].

Although Leiomyomas may remain asymptomatic in a small group of patients, they never less cause morbid symptoms in a large population of patients affected. The common symptom with which patient s with fibroid uterus come to the outpatient is heavy menstrual bleeding but a significant number of patients suffer from primary infertility [3, 4].

Rarely leiomyoma may present with pressure symptoms such as sensation of weight in pelvis, edema and varicosities of legs and bladder irritability.

Next to menstrual disturbances and infertility, Leiomyoma cause numerous complications during pregnancy. A pregnancy complicated by fibroid uterus occurs at a frequency of 1-2 women over the age of 35 years, half of whom are primi para. Miscarriage, low insertion of placenta, faulty presentation, obstructed labor, and abnormal uterine action all are the result of the distortion of the endometrial cavity by fibroids [5, 6]. The exact etiology of leiomyoma uteri is entirely unknown. It has been seen though that the growth of the uterine fibroid is clearly dependent upon ovarian hormones, since fibroids almost never occur before puberty and after menopause and increase in size during may actually recede aftermenupause. Other factors such as parity, age, social and genetic factors have also been postulated but never established with certainly [7, 8].

The actual cause and relationship between fibroids and primary infertility has not been established but it is clear that fibroids or leiomyomas in the uterus interfere with the implantation of zygote in the uterus. It

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is also cauterized a uterus with fibroid is rendered infertile, due, to perhaps to interference of fibroids in the uterus with ovulation [9].

Infertility is commonly associated with myomas. The majority of patients are either nulliparous or of low parity. The association between fibroid uterus and infertility is intriguing principally because support and augment the other in the vicious cycle. Fibroid interfere with fertility and deterrence of pregnancy encourages Leiomyomas [10].

MATERIALS AND METHODS

Objective was to determine the frequency of primary infertility in women suffering from fibroid uterus. It was a Cross-sectional study in Outpatient department of gynecology and obstetrics of Bolan Medical Complex Hospital Quetta from 1st Jan 2018 to 30th Jun 2018. The calculated sample size according to WHO calculator was 203 patients, with 95% confidence level and absolute precision of 3%, taking percentage of infertility 5% with fibroid uterus. Sampling technique was Non-probability consecutive sampling. Inclusion criteria was all patients who presented to outpatient department of gynecology and obstetrics having fibroid uterus on ultrasound age between 18 to 40 years. Exclusion criteria was Patients who presented with fibroid uterus with chronic disease like diabetes and hypertension, pelvic inflammatory disease, tuberculosis and known cases of infertility due to other causes who had also undergone surgical treatment in past. Data collection procedure comprised all the patients presenting with fibroid uterus admitted through outpatient department of gynecology and obstetrics at Bolan medical collage Quetta. Their leiomyomas diagnosed on ultrasound by a senior sonologist in the department of radiology of Bolan medical complex hospital Quetta. The ultrasound findings were collected and documented by same sonologist, on same ultrasound machine in same set up to overcome the intraobserver biases in the diagnosis of fibroid uterus. Their informed consent taken. Detailed questions regarding their demographic status and infertility status recorded in given Proforma. Data analysis done by using SPSS version 10.0. Mean and standard deviation computed for age and duration of infertility.

RESULTS

A total of two hundred and three women presented with fibroid uterus were selected during study period through out patient department of Bolan Medical Complex Hospital Quetta.

All the women were counseled regarding the objective, diagnostic procedure and cost of procedures. Pelvic ultrasound was performed on every patient attending the outpatient presenting with fibroid uterus and primary infertility.

All cases were in reproductive age group ranging from 18 to 40 years of age. 12.8% were between 18-25 years, 45.3% were between 26-32 years and 41.9% were between 33 to 40 years of age (Table 1).

Regarding menstrual cycle out of two hundred and three patients 54.7% were had normal menstrual cycle and flow was also normal. 45.3% were presented with abnormal (heavy and prolong) menstrual cycle.

Out of 203 patients only 9.9% had infertility, and remaining 90.1% were enjoying healthy reproductive life (Table 2).

In this study considering duration of marriage, 35% of women were between 2-10 years, 45% were between 11 to 20 years and 10% were spending marital life of more than 20 years.

According to number of myoma in 63% cases there were multiple and in 36.9% of cases were single fibroids.

According to type of myoma intramural type was found in 53.3% patients, submucosal type were in 4.9%, subserous type was in 40.4% and cervical myoma was in 1.5 % of cases (Table 3).

According to site 44.3% of women had posterior wall myoma, in 37.4 % of cases there

Table 1: **Age Distribution of Cases (n=203)**

Age	Number	Percent
18 – 25 years	26	12.8
26 – 32 years	92	45.3
33 -40 years	85	41.9

Mean 2.2
Standard deviation= 0.68

Table 2: Frequency of infertility (n=203)

Infertility	Patients	Percent
Yes	20	9.9%
No	183	90.1%

Table 3: Type of fibroid (n-203)

Type of fibroid	Patients	Percent
Intramural	108	53.2%
Sub-serous	82	40.4%
Submucosal	10	4.9%
Cervical	3	1.5%

DISCUSSION

Uterine leiomyomas are the most common benign tumors of female genital tract, with a prevalence of 30-50% [1]. It is estimated that 25% of women during reproductive life and over 40% above 50 years are afflected by these tumors [11]. Leiomyomas are asymptomatic in 50% of affected women. However, in

other women, they cause significant morbidity and affect the quality of life. Leiomyomas may compromise the reproductive function, possibly contributing infertility, early pregnancy loss, preterm labor, malpresentation, increased need for caesarean section and postpartum hemorrhage. There is debate regarding whether fibroid cause infertility or if they are simply an association [11]. Infertility is commonly associated with myomas. The majority of the patients are either nulliparous or of low parity [12].

Fibroid is relatively common in patients of reproductive age and infertility is very distressing psychosocial problem for women especially in the tribal society of Balochistan, leading to second marriage and divorce. It is important to know the magnitude of the problem to compare with other part of country and the world. Since fibroid uterus is treatable disease. A number of treatment modalities have been attemted with success both medical and surgical [13, 14].

Leiomyoma represent an increasing medical problem in women attempting to concieve at more advanced age, when the rate of development of these lesion is also increased. Uterine fibroids have been reportd in 27% of infertile women, and 68% of women become pregnant after myomectomy [15, 16].

Few studies have been carried out in the gyneacological population of world. However we assessed the conditions in Bolan Medical Complex Hospital Quetta. Our study was cross-sectional type and carried out in the out patient department. In this study the frequency of primary infertility in uterine leiomyoma was 9.9% whereas 90.1% were fertile. Uterine fibroid is just one cause of infertility, there are a number of other causes and fibroid uterus maybe an incidental finding. A thorough workup needs to be done before blaming the infertility on fibroid. Treating fibroid, especially surgically may add to the problem of conception rather than solving it if not approached systematically [17-21].

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