

ORIGINAL ARTICLE

Frequency of Gynecological Problems in Women on M.D.R. Tuberculosis TreatmentANILA BASIT¹, WAJEEHA SYED², NADIA ASHIQ HUSSAIN³, MUHAMMAD NASIR⁴, LARAIB AURANGZEB⁵¹Associate Prof Department Of Pulmonology MTI LRH Peshawar²Assistant Prof Department Of Gyni MTI LRH Peshawar³Clinical Psychologist Pmdt Unit MTI LRH, Peshawar⁴Pharmacist Pmdt Unit MTI LRH Peshawar⁵Tmo Department Of Pulmonology MTI LRH PeshawarCorresponding author: Syed Wajiha, Email: dr.wajeeha79@gmail.com**ABSTRACT**

Multidrug-resistant TB treatment is notorious for being costly, time-consuming, and ineffective. High levels of resistance to isoniazid and rifampicin, with or without resistance to other anti-TB drugs, describe the microbial type of tuberculosis known as multidrug-resistant tuberculosis. Thirdly, MDR-TB has been shown to negatively affect mothers and infants during pregnancy, labor, and the postpartum period.

Objective: This Study aimed to determine the frequency of gynecological issues among women receiving therapy for multidrug-resistant T.B.

Materials and Methodology: The Obstetrics & Gynecology and department and pulmonology department of Lady Reading Hospital-MTI in Peshawar, K.P., Pakistan, collaborated on a cross-sectional descriptive study. Non-probability sequential sampling was used to get a sample size of 236 using an online G-power tool with a 95% confidence interval.

Results: 236 patients were enrolled, with a range of age from 15-24 years (23.3%), 25-34 years (40.4%), 35-44 years (29.2%), and 45-54 years (6.8%). Before treatment, 56.6% were irregular. 42.4% of patients had normal periods. 66.1% had abnormal menstrual cycles after treatment. Before M.D.R. medication, 33.9% of participants had irregular menstrual cycles; throughout MDR-TB treatment, 66.1% of the population had aberrant menstrual cycles. Ploy-menorrhoea was 40.7%, and oligo-menorrhoea was 59.3%. four contraceptives were surveyed: 3.8% used i.u.c.d., 11.4% pills, 29.7% injectables, and 55.1% barriers. 65.7% had itching and foul-smelling vaginal discharge. 60.2% had dysmenorrhoea. infertility was 62%, 55.1% primary, and 44.9% secondary.

Conclusion: The Frequency of gynecological disorders that develop in women with MD-TB treatment was determined by this study.

Keywords: Multidrug resistance, tuberculosis, Gynaecological problems

INTRODUCTION

WHO reported 13.7 million T.B. infections worldwide in 2008. (WHO). From 1990 to 2008, T.B. cases grew from 6.6 million to 9.4 million, including 3.6 million in women. It's the third leading cause of death, killing 700,000 women annually⁰¹. It contributes disproportionately to female mortality and morbidity outside of obstetrics. A third of T.B. deaths occur among childbearing women, mainly in low-resource nations. Mycobacterium tuberculosis causes the most maternal deaths in Sub-Saharan Africa, especially when combined with H.I.V⁰². In a study of maternal mortality in Johannesburg, South Africa, 70% of HIV-positive women died from the virus rather than obstetric problems; T.B and pneumonia were most common⁰³. Over 200,000 pregnant women had infectious T.B., with the highest frequency in Africa (41%) and Southeast Asia (31%)⁰⁴. Mycobacterium tuberculosis-caused TB is the top infectious killer (M. tuberculosis). Around half a million people acquire multidrug-resistant variants. Pakistan ranks fourth out of 27 nations assessed for T.B⁰⁵. and multidrug-resistant tuberculosis. National Tuberculosis Control Program: 34 per 100,000 Americans die yearly from tuberculosis. Despite therapy, this mortality rate reveals how flawed the healthcare system is. The 1.6 million yearly fatalities from tuberculosis (T.B.) are not reducing. In 2020, the C.D.C⁰⁶. reported a 2% to 3% yearly drop in T.B. Malpractice, poor anti-TB treatment adherence, and H.I.V. co-infection contribute to TB-drug resistance. MDR-TB treatment is expensive, ineffectual, and time-consuming. Multidrug-resistant tuberculosis (MDR-TB) is resistant to isoniazid and rifampicin T.B⁰⁷. may harm both mothers and newborns during pregnancy, delivery, and postpartum. Young individuals, especially reproductive-age women, get MDR-TB. Non-treatment may increase maternal and fetal mortality and morbidity (9, 10), even if second-line medications are teratogenic. Menstrual irregularities usually only cause infertility and many women don't become aware they have them. Women of reproductive age are particularly affected (15-45 years). Polymenorrhoea, oligo-menorrhoea, dysmenorrhoea, abnormal menstrual discharge, and pain may occur

(11). (12) Maternal mortality, pregnancy loss, early delivery, and low birth weight were common in MDR-Tb pregnancies. Early study shows MDR-TB is linked to gynecological diseases⁰⁸. These outcomes must be confirmed in women taking M.D.R. T.B. medication. Multidrug-resistant TB may improve maternal and neonatal outcomes. No PMDT/MDR TB center in Pakistan has ever examined women's health, even though MDR-TB treatment entails hazardous second-line drugs that may affect any organ system⁰⁹. This descriptive study examined gynecological complications among women getting MDR-TB treatment at Lady Reading Hospital-MTI in Peshawar¹⁰.

MATERIALS AND METHODOLOGY

This descriptive cross-sectional Study was done in Peshawar, K.P., Pakistan. Lady Reading Hospital-MTI completed the IRB-approved experiment in six months (ref.). Two hundred thirty-six people used the online G-power tool to create a 95% confidence interval. The cross-sectional study employed non-random, sequential sampling. All the information we got was with consent. Everyone spoke. The research included MDR-TB-diagnosed women aged 15 to 54 without children. Hysterectomy and salpingo-oophorectomy patients were also rejected. Qualitative data was quantified using IBM SPSS version 24.

RESULTS

A total of 236 people, ages 15 to 54, were included in the research. Table 1 summarises the demographic breakdown of the sample by age range, which ranged from 15 to 54 years old: 23.3% were between the ages of 15 and 24, 40.7% were between the ages of 25 and 34, 29.2% were between the ages of 35 and 44, and 6.8% were between the ages of 45 and 54.

Table 1: Participant Age Group Frequency and percentage

Age Grouped	Frequency	Percentage
15 to 24 years	55	23.3
25 to 34 years	96	40.7
35 to 44 years	69	29.2

45 to 54 years	16	6.8
Total	236	100

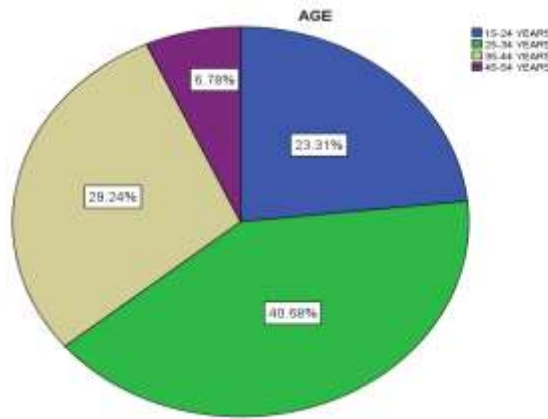


Figure 1: Pie Chart for the Participants' Age Group

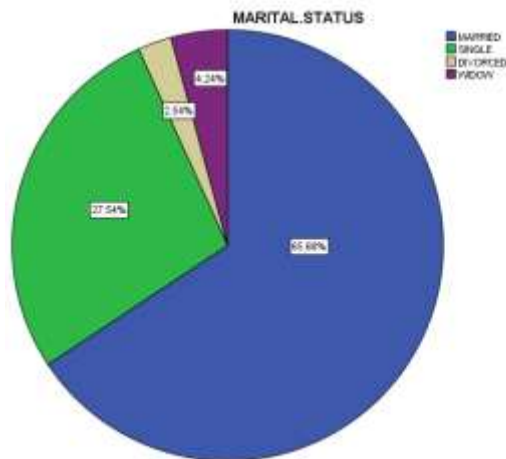


Figure 2: Pie Chart for Marital Status of the Participants

One hundred ninety-two participants (81.4%) were premenopausal, and 44 (18.6%) were post-menopausal. Subject? 236 15-to-54-year-olds participated. M.D.R. patients ages 15 to 24 (23.3%), 25 to 34 (40.7%), 35 to 44 (29.2%), and 45 to 54 (6.8%) had 42.4% normal periods and 56.6% irregular cycles. 33.9% of the research group had irregular periods before M.M.D.R. therapy, whereas 66.1% did after. 40.7% and 59.3% of MDR-TB patients developed ploy and only menorrhagia. Women using MDR-TB treatment had the greatest incidence of itchy and uncomfortable vaginal discharge (67.1% and 33.3%, respectively), suggesting gynecological problems. Four common contraceptives were investigated. 3.8% of women used I.U.D.s, 11.4% oral contraceptives, 29.7% injectables, and 55.1% barrier methods. MDR-TB therapy affects 55.6% of menstruating women.

Table 2: Frequency for clinical characteristics of MDR-TB patients.

Variable	Frequency	Percentage
Age Group		
o 15 to 24 years	55	23.3
o 25 to 34 years	96	40.7
o 35 to 44 years	69	29.2
o 45 to 54 years	16	6.8
Marital Status		
o Married	155	65.7
o Single	65	27.5
o Divorced	6	2.5
o Widow	10	4.2
Pre-menopausal		

o Yes	192	81.4
o No	44	18.6
Post-menopausal		
o Yes	32	13.6
o No	204	86.4
Menstrual cycle		
o Regular	100	42.4
o Irregular	136	57.6
If irregular then		
o Before MDR-TB Treatment	80	33.9
o During MDR-TB Treatment	156	66.1
Define Irregular		
o Poly-Menorrhagia	96	40.7
o Olig-Menorrhagia	140	59.3
Dysmenorrhea		
o Yes	142	60.2
o No	94	39.8
Vaginal Discharge		
o Yes	104	44.1
o No	132	55.9
Vaginal discharge		
o Itch	155	65.7
o Foul Smell	81	34.3
Infertility Issues		
o Primary infertility		
o Secondary infertility		
Contraception Uses		
o I.U.C.D.	9	3.8
o PILLS	27	11.4
o Injectable	70	29.7
o Barriers	130	55.1
Total Participants	236	100

The frequency of ploy menorrhagia and olig-menorrhagia in women receiving MDR-TB therapy is 40.7% and 59.3%, respectively. Women receiving MDR-TB therapy had the greatest rates of itchy and foul-smelling vaginal discharge (67.2% and 33.7%, respectively). Three percent of respondents used intrauterine contraceptive devices, eleven percent used oral contraceptives, twenty-nine percent used injections, and fifty-five percent utilized barriers.

DISCUSSION

Women getting M.D.R. treatment for gynecological diseases were more likely to be married (65.7%) than divorced (2.5%) or widowed (4.2%), whereas 27.5% of single women were of reproductive age. No study has looked into gynecological concerns for MDR-TB women. This study compares T.B¹¹. therapy in pregnant and nonpregnant women. This research didn't account for multidrug-resistant T.B Drug-resistant TB in pregnant women may be treatable. Our Study adds to the evidence of gynecological issues after MDR-TB treatment. Following therapy for MDR-TB, sexual dysfunction, dysmenorrhea, and vaginal discharge emerged. 100 people had normal cycles, whereas 136 had irregular ones. Menstrual cycles were tracked before and after medication¹². In 156 (66.1%) patients, irregular cycles increased after MDR-TB treatment. Eighty-six people (40.7%) had poly-menorrhagia due to an irregular cycle, whereas 140 (50.3%) had oligo-menorrhagia Two hundred thirty-six people helped classify four affordable contraception methods¹³. 60% of women asked weren't using birth control, and injectables and barriers were popular. 130 (55.1%) of 236 respondents preferred the barrier over the injection. Young women in rural Pakistan are more likely to utilize injectable contraception with M.D.R. virus strains. Nariyal F. Fikree et al. researched contraception in Karachi, Pakistan, in 2005¹⁴. This survey asks about condoms, withdrawal, oral pills, injectables, and I.U.D.s, as well as their accessibility, cost, appropriateness, and efficacy. Men and women used birth control at similar rates¹⁵. 19% of both sexes withdraw, 10% take pills, 5% utilize intrauterine devices, and 9% inject. This study shows comparable values to ours Most of our study's participants were from rural regions Therefore injectable drug usage was greater. Vaginal discharge was also a symptom of MDR-TB therapy, with 34.3% reporting a

bad odor and 65.3% citing irritation. 55.1 percent of women with gynecological problems had primary infertility, and 44.9% had secondary. Untreated T.B. or M.D.R. T.B. makes people infertile¹⁶. Adhesions in the pelvic cavity, fallopian tube, and uterine lining changes, loss of fallopian tube ciliary function, and ovarian cyst formation might impact ovarian function. Multidrug-resistant tuberculosis complicates treatment and may cause infertility in women (MDR-TB). (17,18) Social stigma causes psychological concerns for female MDR-TB patients¹⁷.60% of the cohort's patients were depressed, and 25% were worried. According to the same research, women are sad. Cite? MDR-TB with depression is more prevalent in women (5.1%) than males (3.6%). Hormone levels and genetics are hypothesized but unproven causes¹⁸. 28 Women may be more depressed after MDR-TB treatment if they lack spousal supports¹⁹. AnuPathak et al. compared GeneXpert and liquid culture in 2020. 26% experienced menorrhagia, 24% menorrhagia, and 19% hypomenorrhagia. Similar research hasn't explained why MDR-TB patients have gynecological difficulties. QoL declines for gynecological patients and their families, affecting treatment fidelity and results No PMDt site prioritizes gynecology. Individual gynecologists treat these patients. Despite the frequency of gynecological illnesses among P.M.D.T. patients, no location has one. Psychologist work full-time²⁰.

CONCLUSION

This Study aimed to establish the frequency of gynecological issues in MDR-TB patients. Premenopausal women with MDR-TB developed irregular menstruation, dysmenorrhea, poly-menorrhagia, olig-menorrhagia, and infertility. Identifying predisposing factors among women with gynecological problems may lead to early diagnosis and avoidance of risk factors owing to long-term treatment, improving quality of life.

Conflict of Interest: The authors confirm that they have no financial or other interest in the results of this publication.

Ethical Approval: This ethical approval was taken from the Institutional Review Board of Lady Reading Hospital-MTI, Peshawar

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