FREQUENCY OF DEPRESSION AMONG FERTILE AND INFERTILE WOMEN

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ABSTRACT

Objective: To compare the frequency of depression among fertile and infertile women reporting in CMH Abbottabad.

Study Design: A case control study.

Place and Duration of Study: This study was conducted in Combined Military Hospital Abbottabad, over a period of six months from January 2013 to June 2013.

Patients and Methods: The inclusion criteria were all those patients who were married. All the cases were selected from the women reporting in the obstetrics and gynecology department of CMH Abbottabad for investigation and treatment of infertility. A total of 200 patients, 100 fertile and 100 infertile women were included. Patients were given questionnaire form with their consent for research. Beck depression inventory (BDI) was used to assess depression among fertile and infertile women. Other factors such as age, educational level, and duration of infertility, pressure from family members, miscarriages, and support from husband were studied.

Results: Depression was significantly higher in infertile women as compared to fertile women i.e. 95% vs. 63% ($p < 0.001$). It was higher among women with more than 1 year of duration of marriage as compared to those with infertility of one year duration or less.

Conclusion: Infertility is associated with depression.

Keywords: Depression, Infertility, Psychological treatment.

INTRODUCTION

Infertility is defined as a woman of reproductive age who has not conceived after one year of unprotected vaginal sexual intercourse[1]. Infertility is classified into primary, when there is no previous pregnancy (approximately 40% of infertile women) and secondary if there is a previous pregnancy with whatever outcome (approximately 60% of infertile women)[2].

Infertility affects about 15% of women in the USA. Advancing age increases the chance of infertility. About 8% of females between the ages of 20 and 29 are infertile. The condition affects about 5.3 million Americans, or 9% of the reproductive age population, according to the American Society for Reproductive Medicine[3]. It is reported in India that, 13 percent of ever-married women aged 15-49 years were childless in 1981 (rural 13.4% and urban 11.3%) which increased to 16 percent in 2001 (rural 15.6% and urban 16.1%). Over half of married women aged 15-19 years were childless in 1981, which increased to 70% in 2001[4].

Unexplained infertility means when no causative factor is found. Understandably, some people have a difficult time in comprehending why they are not getting pregnant when everything is "normal", and this can lead to more stress. In some patients with unexplained infertility, the explanation may lie in a combination of subtle factors leading to the infertility, or it may be a result of fertilization or embryo development issues[5].

If a woman keeps on having miscarriages (recurrent miscarriage), it is also called secondary infertility[6]. The pregnancy rate per month of a

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woman in her 20's is about 20-25%. Because of this, a woman should seek help, if she has been unsuccessful, to conceive after 12 months of actively trying. The spontaneous miscarriage rate is only about 5-10% and the incidence of a genetic abnormality like Down's syndrome is about 1/1200[7].

There is no universal definition of advanced reproductive age in women, in part because the effects of increasing age occur as a continuum, rather than as a threshold effect[8]. There are no absolutes in infertility, infertility treatment needs to be, with use of assisted reproductive techniques (ART), and births have been reported to several women 66 years of age and one woman age 70. The oldest woman to achieve a naturally conceived pregnancy was 57 years old[9].

Infertility is often a rollercoaster ride of emotions: you may find that you are hopeful one day, but angry or frustrated on the next day. Many researchers recognize that women undergoing fertility treatments are at a high risk for developing depression. Yet, experiencing fertility problems can be stressful for women, and are more likely to attempt suicide as a result of depression due to infertility. Seventy percent of suicide attempts by women are by overdose or similar methods[10]. Depression could be one of the main psychological disorders associated with infertility which appears after recognition of infertility in an individual and un-doubted, the depression associated with infertility would have a significant impact on his/her interest in the treatment and follow up. Treatment creates hopefulness for the future and improvement in personal and social relationships of the couple[11]. The frequency of depression in infertile women increases with the female's age.

Infertility is a social issue for women in Abbottabad who are expected to have children early in their marital life. Women without children often feel incomplete and this result in pressure from their family and society, thus leading to psychological problems. To the researchers' knowledge no local study was found to measure the frequency of depression among infertile women in the vicinity of district Abbottabad.

This study was aimed to compare the frequency of depression among infertile and fertile women reporting in CMH Abbottabad.

MATERIAL AND METHODS

This case-control study was carried out between January 2013 and June 2013 at Combined Military Hospital Abbottabad.

The inclusion criteria for the groups was, primary education as minimum level, no medical or surgical disease during the period of research, marital life of at least one year, regular consummation of marriage, and conformation of the infertility by a gynecologist according to the standard protocol. The selected patients for the study were referred to psychiatry department for the assessment of severity of depression. The group of fertile women included women having at least one child and no infertility problem during the research period. The exclusion criteria was, patients without past history of depression,

Table-1: Comparison of Depression between fertile and infertile group.

Depression	Fertile women (n = 100)	Infertile women (n = 100)
Present	62 (62%)	95 (95%)
Absent	38 (38%)	5 (5%)

$p < 0.001$

Table-2: Association of depression with duration of marriage in infertile group.

	Depression		*p*-value
	Present	Absent	
Duration of marriage			
≤ 1 year	11 (11.6%)	4 (80%)	< 0.001
> 1 year	84 (88.4%)	1 (10%)	
Family Pressure			
No	15 (15.8%)	5 (100%)	< 0.001
Yes	80 (84.2%)	0 (0%)	

women with other problems including both medical and surgical, couple not living together and having perverted behavior.

Total 200 patients were included in the study, 100 fertile women and 100 infertile women. Data collection was done through a psychometric test that is Beck Depression Inventory (BDI). To measure depression we used Beck self-report inventory. Test-retest reliability and validity of Beck questionnaire has been proved by several studies and researches. Beck suggested that a score greater than 9 points is indicative of depression symptomatology. BDI contains 21 questions and the total score range was determined to be from zero to 63. BDI score was also categorized in sub groups: the score of 9 and less demonstrate normal range, 10-15 indicate mild to moderate depressive symptoms and the score of 16 and more indicate clinical depression, (score of 17 to 29 indicates moderate depression and a score of 30 or more indicates severe depression). The questionnaire was completed by the women separately.

Statistical analysis was done using SPSS version 16. Descriptive statistics were used to describe the results. Chi-square test was used to study the association between different variables. A *p*-value < 0.05 was considered as significant.

RESULTS

The study included 100 fertile women and 100 infertile women who completed the questionnaire. Results showed that infertile women have significantly high depression as compare to fertile women i.e. 95% vs. 62% ($p< 0.001$). (Table-1)

In infertile women, depression was significantly associated with duration of marriage ($p<0.001$) and family pressure ($p<0.001$). (Table-2)

DISCUSSION

The aim of the study was to compare the frequency of depression in fertile and infertile women. This study can be valuable because it used BD that differs in both cost and time from a psychiatric structured interview.

According to research, the frequency of the depression was significantly higher in the infertile women than fertile women i.e. 95% vs. 62%. The study carried out in Riyad[12], showed nearly same results, that 49 (53.8%) of the infertile women and 35 (37.2%) of the fertile women had depression.

Among the infertile women, those who had pressure from family members for not getting pregnant were significantly more depressed than those with no such pressure. In a similar study in Iran[13] the BDI mean difference between infertile and fertile women was significant.

Based on the study, an increase in the duration of marriage associated with infertility as shown in results is associated with increased depression. As the duration of marriage increases the depression also increases among infertile women. Same results are found in a Poland study[14] which shows that lower level of occupation, advancing age (over 30 years) and duration of marriage (3-6 years) are risk factors which increase depression in infertile women.

CONCLUSION

Depression among infertile women is higher when we compare them with fertile women. We also concluded that infertile women with more years of marriage also tend to have high rates of depression.

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