

Frequency of Common Infertility Causes in Patients attending Infertility Clinic of Nishtar Hospital Multan

FARHANA HAIDER, RASHIDA PARVEEN, HUMAIRA IMRAN, FARYAL AKHTAR, KHADEJA SATTAR, SYED AFTAB HAIDER

¹Assistant Professor, Multan Medical and Dental College Multan

²Assistant Professor, Gynae unit 2 Nishtar Medical University & Hospital Multan

³Assistant Professor Obst and Gynae Bakhtawar Amin Medical College Multan

⁴Assistant Professor Multan Medical and Dental College Multan

⁵Assistant Professor Nishtar Medical University & Hospital Multan

⁶Associate Professor Anaesthesia ICU Pain Medicine NMU Multan

Correspondence to Dr. Farhana Haider, Email. farhanatirmazi@yahoo.com

ABSTRACT

Aim: To determine the frequency of causes of infertility in married couples attending infertility clinic.

Methods: A total number of 100 married couples who presented in infertility clinic of the hospital were included in this study. Detailed clinical history regarding the infertility parameters was taken from all patients. After that ultrasonography was done in all patients to determine the causes of infertility. Diagnosis of different causes of infertility such as ovulatory disorders, fallopian tube disorders, endometriosis, male factors and unexplained causes was made for each patient.

Results: Mean age of female partners was 29.87±5.26 years. Mean age of male partners was 33.64±6.12 years. There were 55(55%) patients presented with primary infertility and 45(45%) with secondary infertility. Regarding spectrum of infertility, 51% patients who were diagnosed of having ovulatory disorders, endometriosis in 13% patients, fallopian tube disorders in 21% patients, and male factor was diagnosed in 15% patients.

Conclusion: In present study, both male and female genders were found to have infertility. Male factor was found in 15% cases of infertility. Regarding female factors, most common cause of infertility was ovulatory disorders diagnosed in 51% patients.

Keywords: Infertility, Ovulatory disorders, male factor.

INTRODUCTION

Infertility is defined as the inability to conceive after one year of frequent unprotected regular intercourse.¹ Infertility mostly affects the psychological state of couples causing anxiety and depression.² Worldwide millions of people suffer from infertility, with an estimation of about 3.5 to 18.9% married couples suffer from infertility. In resource limiting countries infertility incidence is reported from 6.9% to 9.3% in different studies.³⁻⁵ Pakistan is one of the countries with least incidence of infertility of only 3.9% according to WHO.⁶ Infertility varies from nation to nation because of varying life style and food habits in different regions.⁷

The commonly reported causes of infertility in literature are; ovulatory disorders, endometriosis, fallopian tube defects, male factors and unexplained causes. The incidence of these causes varies from region to regions. A different studies have reported clear differences in the spectrum of causes of infertility.^{8,9}

Very few studies have been conducted in Pakistani population to determine the common causes of infertility. And studies that were conducted are now more than 5 years back.^{6,10} So there is a need to collect recent and updated data regarding the frequency of different factors of infertility in our population. So the aim of the proposed study is to determine the frequency of different causes of infertility in married couples presenting in infertility clinic of a tertiary care hospital of Pakistan. The results of this study can help us to recognize the common causes of infertility in our population. And recognition of highly prevalent causes can help us to manage these causes in a better way and to

conduct more research work to prevent and treat these causes in a better way.

METHODS

In this cross-sectional study, a total number of 100 married couples who presented with complaint of infertility in Nishtar hospital Multan were included. The study period was 01-Aug-2019 to 01-March-2020. Patients having age of female partner 18-40 years and that of male partner 20-60 years and duration of marriage >1 year were included. Patients with incomplete examination and laboratory reports were excluded. A written informed consent was taken from all patients.

Data regarding age of couples, duration of marriage and causes of infertility were noted for all patients. Detailed clinical history regarding the infertility parameters was taken from all patients. After that ultrasonography was done in all patients to determine the causes of infertility. Diagnosis of different causes of infertility such as ovulatory disorders, fallopian tube disorders, endometriosis, male factors and unexplained causes was made by combined approach of consultant radiologist and gynecologist.

RESULTS

Mean age of female partners was 29.87±5.26 years. Mean age of male partners was 33.64±6.12 years. Mean duration of Marriage of patients was 4.04±3.07 years.

There were 55(55%) patients presented with primary infertility and 45(45%) patients with secondary infertility (Fig. 1). Regarding spectrum of infertility, 51% patients who

were diagnosed of having ovulatory disorders, endometriosis in 13% patients, fallopian tube disorders in 21% patients, and male factor was diagnosed in 15% patients (Fig. 2).

Fig. 1: Incidence of Type of Infertility.

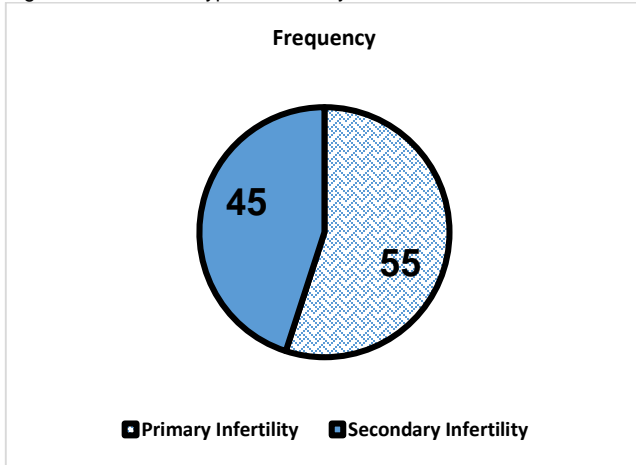
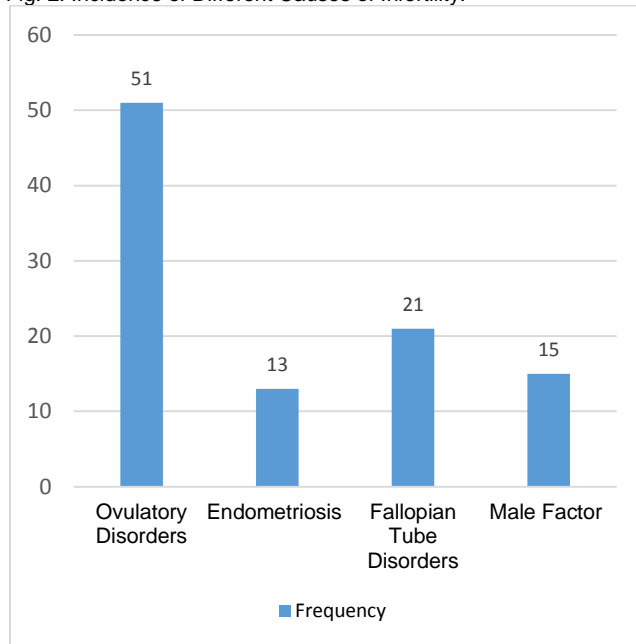


Fig. 2: Incidence of Different Causes of Infertility.



DISCUSSION

Inability to conceive birth is a very bad social dilemma in Pakistan that often results in divorce, second marriage or adoption of child. Infertility has devastating effects on both social and economic aspects. Despite having the so much infertility consequences, the incidence and spectrum of infertility is not studied vastly. Furthermore, advances in diagnosis and treatment of infertility has lead to considerable variability in the worldwide spectrum of infertility^{11,12}.

In our study, there were 55% couples who presented with primary infertility and 45% couples presented with secondary infertility. A study by Kalima-Munalula et al.

reported primary infertility in 28.5% patients and secondary infertility 71.4% patients¹³. Also, Esmailzadeh et al. from reported infertility in 15.5% of the female patients out of which 4.3% females were having primary infertility¹⁴.

In our study, 51% patients who were diagnosed of having ovulatory disorders, endometriosis in 13% patients, fallopian tube disorders in 21% patients, and male factor was diagnosed in 15.0% patients. Mascarenhas et al. also reported ovulation disorders as the commonest infertility causes¹⁵. While a study by Boivin et al. reported male factor is most common infertility cause in their study¹⁶. Data from different studies have reported male factor in 20 to 40% cases, female factors in 30 to 55% and unknown etiology in 5% to 15% cases¹⁶.

Royan Institute, Tehran, Iran, the main cause of infertility was male factor.¹⁰⁶ In most studies, male factor is reported 20-40%, female factor is 30-55%, combined factor is 35% and unknown etiology have been reported 5-15%^{17,18}.

Uterine factors are associated with recurrent miscarriages but these have very low prevalence. Uterine factors are responsible for only 5-10% causes of infertility¹⁹.

Ovulation dysfunction is another important cause of infertility. A study by Nygren et al. reported ovulation disorders in 26% patients presenting with infertility. While in present study ovulation disorders were reported in 51.0% patients²⁰.

Etiological pattern of infertility varies in different parts of world. Male and female factors both are responsible for infertility. So, both the partners should be counselled and investigated properly before proceeding to aggressive infertility treatments. There was a paucity of studies related to etiological pattern of infertility. So, this study has been done to know the cause and clinical pattern of infertility in married couples in Pakistan.

CONCLUSION

In present study, both male and female gender were found to have infertility. Male factor was found in 15.0% cases of infertility. Regarding female factors, most common cause of infertility was ovulatory disorders diagnosed in 51.0% patients.

REFERENCES

1. Practice Committee of the American Society for Reproductive Medicine. Definitions of infertility and recurrent pregnancy loss: a committee opinion. *FertilSteril.* 2013;99(1):63.
2. Szkodziak P, Wozniak S, Czuczwar P, Wozniakowska E, Milart P, Mroczkowski A, et al. Infertility in the light of new scientific reports-focus on male factor. *Ann Agric Environ Med.* 2016;23(2):227-30.
3. World Health Organization. Global prevalence of infertility, infecundity and childlessness. 2015. (available at; <https://www.who.int/reproductivehealth/topics/infertility/burden/en/>)
4. Al-Turki HA. Prevalence of primary and secondary infertility from tertiary center in eastern Saudi Arabia. *Middle East FertilSoc J.* 2015;20(4):237-40.
5. Kazemjaliseh H, Tehrani FR, Behboudi-Gandevani S, Hosseiniapanah F, Khalili D, Azizi F. The prevalence and causes of primary infertility in Iran: a population-based study. *Global J Health Sci.* 2015;7(6):226-32.

6. World Health Organization. Infertility: a tabulation of available data on prevalence of primary and secondary infertility. Geneva: 1997. programme on maternal and child health and family planning division of family health WHO Manual for the Standardized Investigation. 1997.
7. Homan GF, Davies M, Norman R. The impact of lifestyle factors on reproductive performance in the general population and those undergoing infertility treatment: a review. *Human Reprod Update*. 2007;13(3):209-23.
8. Ara B, Zaibunnisa, Ara F, Baloch A. Diagnostic laparoscopy for infertility; an accurate technique for evaluation. *Professional Med J*. 2016;23(8):1005-9.
9. Masoumi SZ, Parsa P, Darvish N, Mokhtari S, Yavangi M, Roshanaei G. An epidemiologic survey on the causes of infertility in patients referred to infertility center in Fatemeh Hospital in Hamadan. *Iran J Reprod Med*. 2015;13(8):513-6.
10. Khatoon K, Malik RM. Various factors for infertility in infertility clinic, Gynae Unit-I, Services Hospital, Lahore. *Ann King Edward Med Uni*. 2005;11(4):427-31.
11. Winkelman WD, Katz PP, Smith JF, Rowen TS, Infertility Outcomes Program Project Group. The sexual impact of infertility among women seeking fertility care. *Sexual medicine*. 2016 Sep 1;4(3):e190-7.
12. Jamil S, Shoaib M, Aziz W, Ather MH. Does male factor infertility impact on self-esteem and sexual relationship?. *Andrologia*. 2019 Nov 5:e13460.
13. Kalima-Munalula MN, Ahmed Y, Vwalika B. Factors associated with infertility among women attending the gynaecology clinic at University Teaching Hospital, Lusaka, Zambia. *Med J Zambia*. 2017;44(1):41-4.
14. Esmaeilzadeh S, Farsi M, Nazari T. The cause of infertility frequency in the patients referring to Babol township fatemehzahra infertility center from May 1996 to May 1998. *J Mazandaran Univ Med Sci*. 2002;12(1):29-34.
15. Mascarenhas M. N, Flaxman S. R, Boerma T, Vanderpoel S, Stevens G. A. National, regional, and global trends in infertility prevalence since 1990: A systematic analysis of 277 health surveys. *PLoS Med*. 2012;9(12):e1001356.
16. Boivin J, Bunting L, Collins J. A, Nygren K. G. International estimates of infertility prevalence and treatment-seeking: potential need and demand for infertility medical care. *Human Reprod*. 2007;22(6):1506-12.
17. Meng Q, Ren A, Zhang L, Liu J, Li Z, Yang Y, Li R, Ma L. Incidence of infertility and risk factors of impaired fecundity among newly married couples in a Chinese population. *Reprod Biomed Online*. 2015;30(1):92-100.
18. Mohammadm K, Ardalani A. An overview of the epidemiology of primary infertility in Iran. *J Reprod Infertil*. 2009;10(3):213-216.
19. Naab F, Brown R, Heidrich S. Psychosocial health of infertile Ghanaian women and their infertility beliefs. *J Nurs Scholarship*. 2013;45(2):132-140.
20. Nygren K. G, Sullivan E, Zegers-Hochschild F, Mansour R, Ishihara O, Adamson G. D, et al. International Committee for Monitoring Assisted Reproductive Technology (ICMART) world report: assisted reproductive technology 2003. *FertilitySteril*. 2011;95(7):2209-22.