IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 22, Issue 1 Ser.13 (January. 2023), PP 49-52
www.iosrjournals.org

Prevalence Of Factors Causing Infertility: A crossectional Observational Study

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Abstract
Background: *An understanding of the medical causes of infertility is crucial in order to reduce incidences of Infertility and for improving the clinical management of infertility.*
Objectives and Aiims*: The aims were to study the causes of infertility and to calculate the proportion of the individual factors contributing to it in the population coming to a tertiary level public health facility. Setting and Design: This cross-sectional, observational study was done in an infertility clinic in a medical college and government hospital.*
Materials and Methods*: The study comprised 120 couples who came for infertility evaluation and treatment. Cause of infertility in the couple was assigned on the basis of history and examination findings.*
Results:*Majority of the patients were in the age group of 25-30 years in women and the next most common age group was more than 30 years.Female factor accounted for 46.6% of the cases with polycystic ovarian syndrome (PCOS) being the leading cause. Infertility causes changed as the age of marriage increased.*
Conclusion
In the population coming to a public sector tertiary care center, the incidence of primary infertility is more than secondary infertility.Female factor remains the main cause followed by unexplained causes.Among the female causes, PCOS remains the most common cause followed by tubal factor.Tubal factor infertility is significantly associated with PID and TB in our country.
Keywords*: Infertility, male factor infertility, oligospermia, prevalence, public sector*

Date of Submission: 15-01-2023 Date of Acceptance: 31-01-2023

I. Introduction:

Infertility is defined by gynaecologists and physicians as a disease of the reproductive system due to which women fail to achieve pregnancy after regular unprotected sex for twelve or more months (WHO, ICMART). In contrast, demographers define it as the inability of women in their reproductive age (15–49) years to become pregnant after exposure to pregnancy for five or more years. (1-6). Infertility is a significant clinical problem today, affecting 8–12% of couples worldwide. (7,8) Genetic and environmental factors including infectious or parasitic diseases, lifestyle, stress, postponing parenthood, and obesity might consider as essential determinants of infertility.(9, 10, 11, 12)

Interest of different politicians seems to be mainly concerned about the issues regarding overpopulation and reproductive health, and the problem of women dealing with infertility remains subdued. In countries such as India, the prevalence of tuberculosis being high, infectious diseases contributing to infertility becomes a major factor. Infertility is not only a medical problem but also takes a major toll psychologically and financially on the couples.

Thus, this study focuses on the commonest causes on infertility prevalent locally in Jammu and to know the prevalence of each factor in order to ensure the prompt and effective management of cases.

Aiims and objectives

To study the causes and proportion of infertility factors in the patients attending the obstetrics and gynecology department of a tertiary care center.

II. Material and Methodology:

This was a retrospective observational study undertaken in the obstetrics and gynecology department of SMGS Hospital, Jammu.Data was collected from the records section of the obstetrics and gynecology department of SMGS Hospital, Jammu which included admission register, case files etc.A sample of 120 patients were selected by simple random sampling from and included in the study from May 2021to April 2022. Women married for more than 1 year in the age group of 19-49 years and without the use of contraceptives either as primary or secondary infertility were included.

Statistical Analysis

SPSS software 16.0 (Released 2016. IBM SPSS Statistics for Windows, Version 24.0. IBM Corp., Armonk, New York) was used for analysis of the data was done. The study included both quantitative and qualitative data.

III. Results

Results were analyzed based on: infertility history including history of any previous treatment taken, surgical history, and coital historyand examination findings including general and specific with reports of investigations interpretated as a whole.

Majority of the patients were in the age group of 25-30 years in women and the next most common age group was more than 30 years.

The causes of infertility in 120 patients were divided into four standard categories (FIG 1):

1. Female factor
2. Male factor
3. Combined cases
4. Unexplained infertility

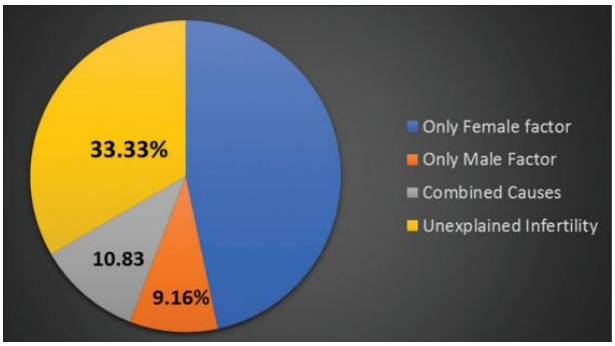

Fig 1: causes of infertility in 120 patients

Analyzing the female factor (FIG 2) where it was responsible for infertility, it was found that the main cause found in our study population was the ovarian cause (polycystic ovarian syndrome). Tubal pathologies included pelvic inflammatory disease, genital TB and endometriosis, and uterine causes (malformations and fibroids) with endocrine causes contributed to 20%. While majority of the females did not have any medical comorbidity the most common ones seen were endocrine disorders.Hypothyroidism was the most common endocrine disorder followed by diabetes mellitus.

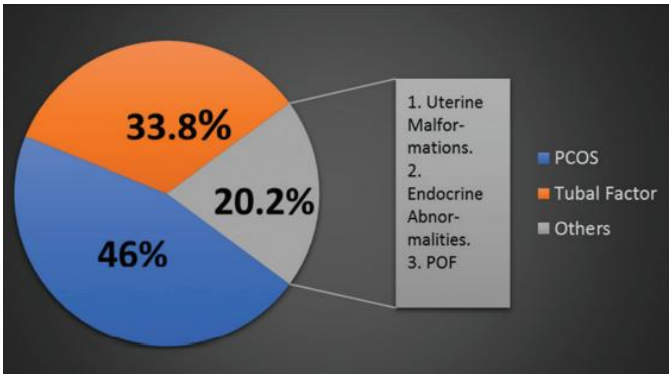

Fig 2: Female factors responsible for infertility

For the evaluation of male infertility, semen analysis reports were evaluated and 23 males had abnormal reports.The age distribution of men with semen abnormalities is shown in fig 3

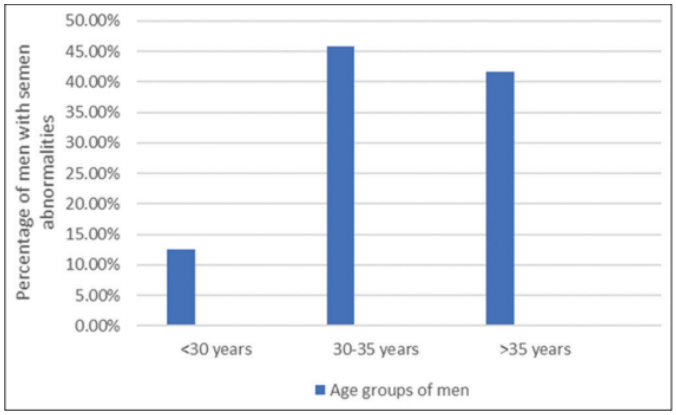

Fig 3: Evaluation of male infertility

IV. Discussion

Female age is the most important determinant of spontaneous as well as pregnancies from assisted reproduction. Fecundity starts declining in the fourth decade and fertility starts declining as early as 32 years. The average age of female partners coming for infertility treatment in our study was 28 years and male partners was 33 years.Furthermore, as the age of marriage increases, the incidence of infertility increases.

Among the causes of female infertility found, PCOS and tubal pathology were the most common causes contributing 46% and 33.8%, respectively, to all cases attributed to female infertility. Studies done by Mittal *et al.*, Patel *et al.* and Rajashekar *et al.* also showed that the main female factor causing infertility is PCOS.(13,14 15) Studies done in developed countries also say that PCOS is the single most common cause of female factor of infertility.(16,17 18)

Abnormal semen parameters in our study were seen in 20.8% of the males. Abnormal semen parameters are seen in approximately 7% of the infertile couples

In our study age of marriage varied from 1.5 years to 18 years average being 6.5 years.In couples married for <5 years, PCOS and tubal causes related to STIs were the most common causes whereas in couples married for >5 years, the proportion of unexplained infertility and male factor increased.

In the combination of male and female factors, ovulatory disorders with abnormal semen were the most common combination followed by tubal infertility combined with abnormal semen.

Unexplained infertility is a diagnosis of exclusion after evaluation of the male and female factors fails to identify a specific cause for infertility. The incidence of unexplained infertility is quoted to be around 30%.

V. Conclusion

In the population coming to a public sector tertiary care center, the incidence of primary infertility is more than secondary infertility.Increasing age of marriage influences the causes with unexplained infertility and male factor more commonly seen as the age of marriage increases. Female factor remains the main cause followed by unexplained causes.Among the female causes, PCOS remains the most common cause followed by tubal factor.Tubal factor infertility is significantly associated with PID and TB in our country.

References

[1]. A.T. Fidler, J. BernsteinInfertility: from a personal to a public health problem.Publ Health Rep, 114 (6) (1999 Nov), p. 494
[2]. Patel, P.S. Sharma, P. Kumar.Sociocultural determinants of infertility stress in patients undergoing fertility treatments.J Hum Reprod Sci, 11 (2) (2018 Apr), p. 172
[3]. P.C. Adamson, K. Krupp, A.H. Freeman, J et al. Prevalence & correlates of primary infertility among young women in Mysore, India.Indian J Med Res, 134 (4) (2011 Oct), p. 440
[4]. S. Ganguly, S. Unisa.Trends of infertility and childlessness in India: findings from NFHS data.Facts, views & vision in ObGyn, 2 (2) (2010), p. 131
[5]. S. Gurunath, Z. Pandian, R.A. Anderson, et al. Defining infertility—a systematic review of prevalence studies.HumReprod Update, 17 (5) (2011 Sep 1), pp. 575-588
[6]. T. Olu Pearce:She will not be listened to in public: perceptions among the Yoruba of infertility and childlessness in women,Reprod Health Matters, 7 (13) (1999 Jan 1), pp. 69-79
[7]. World Health Organization:Infertility: A Tabulation of Available Data on Prevalence of Primary and Secondary Infertility.World Health Organization, Geneva (1991)
[8]. S.Z. Van Der Poel:Historical walk: the HRP special programme and infertilityGynecolObstet Invest, 74 (3) (2012), pp. 218-227
[9]. U. Larsen;Childlessness, subfertility, and infertility in Tanzania.Stud Fam Plann (1996 Jan 1), pp. 18-28

[10]. O.S. Philippov, A.A. Radionchenko, V.P. Bolotova et al:Estimation of the prevalence and causes of infertility in western Siberia.Bull World Health Organ, 76 (2) (1998), p. 183
[11]. N.C. Sharon, H.B. Linda:Infertility Counselling: A Comprehensive Handbook for Clinicians(second ed.), Cambridge University Press, USA (2006), p. 635
[12]. L. Schmidt, T. Sobotka, J.G. Bentzen, et al.ReproductionSociety Task Force. Demographic and medical consequences of the postponement of parenthood. Hum Reprod Update, 18 (1) (2012 Jan 1), pp. 29-43
[13]. Mittal A, Yadav S, Yadav SS, Bhardwaj A, Kaur R, Singh P, et al. An epidemiological study of infertility among urban population of Ambala, Haryana. Int J InterdiscipMultidiscip Stud. 2015;2:124–30.
[14]. Patel A, Sharma PS, Narayan P, Binu VS, Dinesh N, Pai PJ. Prevalence and predictors of infertility-specific stress in women diagnosed with primary infertility: A clinic-based study. J Hum Reprod Sci. 2016;9:28–34.
[15]. Rajashekar L, Krishna D, Patil M. Polycystic ovaries and infertility: Our experience. J Hum Reprod Sci. 2008;1:65–72.
[16]. Stewart-Smythe GW, van Iddekinge B. Lessons learned from infertility investigations in the public sector. S Afr Med J. 2003;93:141–3.
[17]. Chiamchanya C, Su-Angkawatin W. Study of the causes and the results of treatment in infertile couples at thammasat hospital between 1999-2004. J Med Assoc Thai. 2008;91:805–12.
[18]. Lotti F, Maggi M. Ultrasound of the male genital tract in relation to male reproductive health. Hum Reprod Update. 2015;21:56–83.

Utkarsha Khajuria, et. al. "Prevalence Of Factors Causing Infertility: A crossectional Observational Study." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 22(1), 2023, pp. 49-52.