

Demographic Assessment of Infertility among Patients Visited to a Tertiary Care Teaching Centre

Swati Bansal¹, Mukesh Mittal^{2*}

¹Senior Specialist, Gynaecology & Obstetrics, Zanana Hospital, SMS Medical College, Jaipur, Rajasthan, India.

^{2*}Assistant Professor, Department of Radiodiagnosis, SMS Medical College, Jaipur, Rajasthan, India.

ABSTRACT

Background: Infertility disturbs approximately 60-80 million couples around the globe and is increasing at a rapid pace. Most societies around the globe are designed in a way that children are required for caring and maintenance of parents during old age. The present study was conducted with the aim to provide the demographic assessment of infertility amongst patients visiting to a Tertiary Care Teaching Centre.

Materials and Methods: The present survey was done in the Department of Gynaecology of SMS Medical College, Jaipur, Rajasthan amongst 50 cases of primary and secondary infertility reporting to the outpatient department. Complete blood evaluation, urine evaluation and ECG of females were obtained. If both the tubes were filled but there no spill, distal tubal block was considered. All the results obtained were arranged in a tabulated form and analyzed using SPSS software. Percentage of all the data was obtained.

Results: The study was conducted amongst 50 females with mean age of 25 .83 years. There were 2% subjects in upper class that had primary infertility. There were 16% subjects with primary infertility and 4% with secondary infertility between

20-24 years of age. There were 42% subjects with primary infertility and 27% with secondary infertility between 25-29 years of age.

Conclusion: Problem of infertility is a global issue and its prevalence is increasing at a rapid pace. Biopsy of ovary and tubes can also be done for this purpose.

Keywords: Infertility, Ovary, Prevalence.

*Correspondence to:

Dr. Mukesh Mittal,
Assistant Professor,
Department of Radiodiagnosis,
SMS Medical College, Jaipur, Rajasthan, India.

Article History:

Received: 18-09-2017, Revised: 12-10-2017, Accepted: 27-11-2017

Access this article online

Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2017.3.6.094	

INTRODUCTION

Infertility disturbs approximately 60-80 million couples around the globe and is increasing at a rapid pace.¹⁻³ According to a demographic survey in the year 2002 by the World Health Organization amongst developing nations (except China) indicated that approximately 186 million females are infertile.⁴ It is crucial to identify the burden of infertility in each nation as it has an important role in evidence based decision, however in order to achieve this step the accurate estimation of rate of primary infertility rate is important. In another study the reported prevalence of primary infertility amongst developed and less developed nations was 6.6-26.4% and 5-25.7% respectively.⁵ Infertility is of important public health concern with serious social impact. Parenthood is highly accentuated in every society. Most societies around the globe are designed in a way that children are required for caring and maintenance of parents during old age. Even in the societies that have social support systems, children and family are anticipated to provide the care amongst the elderly.⁶ The present study was conducted with the aim to provide the demographic assessment of infertility amongst patients visiting to a Tertiary Care Teaching Centre.

MATERIALS AND METHODS

The present survey was done in the Department of Gynaecology of SMS Medical College, Jaipur, Rajasthan amongst 50 cases of primary and secondary infertility reporting to the outpatient department. The study included females who were trying to conceive for 1 year between the age range of 20-40 years. Females using contraceptive or presence of male factor for infertility were excluded from the study. Subjects with hernias or bowel obstruction were not included in the study. All the subjects were informed about the study and a written consent was obtained from all in their vernacular language. Ethical committee clearance was obtained from institutional ethical board. A detailed history and medical tests of all the females was performed. Complete blood evaluation, urine evaluation and ECG of females were obtained. Sonosalpingography and HSG were performed amongst all the subjects. HSG was regarded as normal if both fallopian tubes were filling normally and free from intra-abdominal spill of the contrast medium without pocket formation. If both the tubes were filled but there no spill, distal tubal block was considered. If the passage of contrast medium was detained proximal to the

fimbrial end, interstitial block was considered as diagnosis. Failure of contrast medium to spread freely within peritoneal cavity after spillage or pocketing was considered as peritubal or pelvic adhesions. General anesthesia was used for laparoscopy. All the results obtained were arranged in a tabulated form and analyzed using SPSS software. Percentage of all the data was obtained.

RESULTS

The study was conducted amongst 50 females with mean age of 25.83 years. Table 1 shows the distribution of subjects according to religion. Maximum number of patients (88 %) in the present study was Hindus and only 12 % were Muslims. Table 2 shows distribution of subjects according to residential area. A total of 50 patients selected at random were included in the present study. Out of these, 76% were from urban area and 24% from rural area.

Table 1: Religion wise Distribution

Religion	No. of cases	Percentage
Hindu	44	88
Muslim	06	12
Total	50	100

Table 2: Distribution of patients according to Residential Area

Residence	No. of cases	Percentage
Urban area	38	76
Rural area	12	24
Total	50	100

Table 3: Distribution according to social class

Social class	Primary Infertility	%	Secondary Infertility	%	Total	%
Upper	1	2	0	2	1	2
Middle	31	62	14	28	45	90
Lower	3	6	1	2	4	8
Total	35	70	15	30	50	100

Table 4: Age wise Distribution of primary and secondary infertility

Age Group	Primary Infertility	%	Secondary Infertility	%	Total	%
20-24	8	16	2	4	10	20
25-29	21	42	6	12	27	54
30-34	4	8	5	10	9	18
35-39	2	4	2	4	4	8
Total	35	70	15	30	50	100

Table 3 depicts distribution of cases according to socio-economic status. There were 2% subjects in upper class that had primary infertility. There were 62% subjects amongst middle class that had primary infertility and 28% had secondary infertility. Amongst lower class, 6% had primary infertility and 2% had secondary infertility.

Table 4 shows the age wise distribution of primary and secondary infertility. There were 16% subjects with primary infertility and 4% with secondary infertility between 20-24 years of age. There were 42% subjects with primary infertility and 27% with secondary infertility between 25-29 years of age. There were 8% subjects with primary infertility and 10% with secondary infertility between 30-34 years of age. There were 4% subjects with primary infertility and 4% with secondary infertility between 35-39 years of age.

DISCUSSION

The incidence of infertility above the level indicates preventable or treatable causes are responsible for this. Infertility seem to be highest amongst countries that have high fertility rates, a condition termed as "barrenness amid plenty".⁷ Even in presence of heavy load and influence of infertility, there have been limited estimations regarding its prevalence. The prevalence of infertility varies between 3.5% to 22% amongst various nations, depending upon the criteria used of definition.⁸⁻¹⁰ Defining the subjects at

risk of infertility is tough without extra information, it is impossible for the responder or interviewers to establish the true answer. Amongst various demographic features, infertility has mainly exaggerated by age; the problem is more amongst in modern societies as many women postpone childbearing to their late ages. As per our study, there were 2% subjects in upper class that had primary infertility. There were 62% subjects amongst middle class that had primary infertility and 28% had secondary infertility. Amongst lower class, 6% had primary infertility and 2% had secondary infertility. According to Gurunath et al the difference in definitions of primary infertility, even amongst a single population, has resulted in a wide range of prevalence of infertility ranging from 6.8-38.6%.^{11,12} As per Barooti et al amongst women residing in Tehran the prevalence of infertility was quite high in reproductive age and according to Vahidi et al, the prevalence is more than that reported by Safari Nejad et al (21.1% vs. 8%).¹³⁻¹⁵ A study conducted amongst two tribal societies in central India have shown that the mean age of infertile women amongst the Khairwars was 31.3±8.9 years and amongst non-Khairwars was 27.5±9.2 years.¹⁶ In another similar study, the mean age range of primary and secondary infertile females was found to 28.9±7.9 and 37.5±8.6 years.¹⁷ The mean age of females with primary infertility was 25.9±3.12 years. In another study conducted at Mysore.⁷ Another study has shown

that the mean age of infertile females was 38.9 ± 4.9 years at the time of the study.¹⁸ According to our study, there were 16% subjects with primary infertility and 4% with secondary infertility between 20-24 years of age. There were 42% subjects with primary infertility and 27% with secondary infertility between 25-29 years of age. There were 8% subjects with primary infertility and 10% with secondary infertility between 30-34 years of age. There were 4% subjects with primary infertility and 4% with secondary infertility between 35-39 years of age.

CONCLUSION

Problem of infertility is a global issue and its prevalence is increasing at a rapid pace. Laparoscopy gives definite diagnosis of any associated pelvic pathology like TB, endometritis and PID. Biopsy of ovary and tubes can also be done for this purpose.

REFERENCES

1. Adamson PC, Krupp K, Freeman AH, Klausner JD, Reingold AL, Madhivanan P. Prevalence & correlates of primary infertility among young women in Mysore, India. *Indian J Med Res* 2011; 134: 440-446.
2. Boivin J, Bunting L, Collins JA, Nygren KG. International estimates of infertility prevalence and treatment-seeking: potential need and demand for infertility medical care. *Hum Reprod* 2007; 22: 1506-1512.
3. Stephen EH, Chandra A. Updated projections of infertility in the United States: 1995-2025. *FertilSteril* 1998; 70: 30-34.
4. ORC Macro. The World Health Organization. Infecundity, infertility, and childlessness in developing countries. Demographic and Health Surveys (DHS) Comparative reports No. 9 .maryland, USA. 2004
5. Volgsten H, Skoog Svanberg A, Ekselius L, Lundkvist O, SundstromPoromaa I. Prevalence of psychiatric disorders in infertile women and men undergoing in vitro fertilization treatment. *Hum Reprod* 2008; 23: 2056-2063.
6. Rutstein SO, Iqbal HS. Infecundity, Infertility, and Childlessness in Developing Countries. Calverton, Maryland, USA: ORC Macro and the World Health Organization; 2004 Sept. 74 p. DHS Comparative Reports No.: 9.
7. Adamson PC, Krupp K, Freeman AH, Klausner JD, Reingold AL, Madhivanan P. Prevalence & correlates of primary infertility among young women in Mysore, India. *Indian J Med Res.* 2011;134:440-6.
8. Larsen U. Research on infertility: which definition should we use? *FertilSteril* 2005; 83: 846-852.
9. American Society for Reproductive Medicine. Definitions of infertility and recurrent pregnancy loss. *FertilSteril* 2008; 90:1603.
10. Larsen U, Menken J. Individual-level sterility: a new method of estimation with application to sub-Saharan Africa. *Demography* 1991; 28: 229-247.
11. Gurunath S, Pandian Z, Anderson RA, Bhattacharya S. Defining infertility--a systematic review of prevalence studies. *Hum Reprod Update* 2011; 17:575-588.
12. T Marchbanks PA, Peterson HB, Rubin GL, Wingo PA. Research on infertility: definition makes a difference. The Cancer and Steroid Hormone Study Group. *Am J Epidemiol* 1989;1:30-67.
13. Safarinejad MR. Infertility among couples in a population-based study in Iran: prevalence and associated risk factors. *Int JAndrol* 2008; 31: 303-314.
14. Vahidi S, Ardalan A, Mohammad K. Prevalence of primary infertility in the Islamic Republic of Iran in 2004-2005. *Asia Pac J Public Health* 2009; 21: 287-293.
15. Barouti E, Ramezani Tehrani F, Heydari Seradj M. [Primary infertility based on marriage age in Tehran]. *Hakim* 1999; 2: 88-93. (In Persian)
16. Kumar D. Prevalence of female infertility and its socio-economic factors in tribal communities of central India. *Rural and Remote Health.* 2007
17. Hassan KES. Prevalence of infertility and its impact on marital fertility, Egypt.1993 [cited 2013 Dec 25];
18. Weghofer A, Kim A, Barad DH, Gleicher N. Age at menarche: a predictor of diminished ovarian function? *FertilSteril.* 2013;100(4):1039-43.

Source of Support: Nil. **Conflict of Interest:** None Declared.

Copyright: © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882.

This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Cite this article as: Swati Bansal, Mukesh Mittal. Demographic Assessment of Infertility among Patients Visited to a Tertiary Care Teaching Centre. *Int J Med Res Prof.* 2017 Nov; 3(6):429-31. DOI:10.21276/ijmrp.2017.3.6.094