Demographic Characteristics of Infertile Women in a Medical College

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Abstract: During the past decade there has been a dramatic increase in the number of women seeking evaluation of infertility. Demographic characteristics of 42 apparently healthy patients with infertility were studied at the Department of Obstetrics and Gynaecology, GMC Hospital, during the period from June 2016 to May 2017. Out of 42 patients, 73.81% were house wife and rest did service. 71.43% belonged to Hindu and 28.57% belonged to Islam religion. Majority (66.67%) of patients came from rural background. In primary infertility, most of the patients were in the age group of 26-30 years, while in secondary infertility, 50% belonged to age group 26-35 years and other 50% belonged to 31-35 years group. Out of 24 cases of primary infertility, majority (58.33%) had history of infertility for 2-3 years. Most of the secondary infertile women had 2-5 years duration of infertility.
Keywords: Infertility, primary infertility, secondary infertility, demography, age, residency status.

INTRODUCTION

Infertility affects about 12-14% of reproductive age couples [1]. Globally, this means that 50-80 million people are facing the problem of getting an integrated family. It may jeopardise the couple's psychological harmony and perilously shatter their marital stability. According to WHO, infertility is defined as inability to conceive following one year of regular unprotected intercourse. Primary infertility refers to couples who have not become pregnant after atleast one year of having intercourse without using birth control methods.

Secondary infertility refers to the inability to conceive following a previous pregnancy, despite cohabitation in the absence of contraception.

Infertility is a multidimensional problem with social, economic and cultural implications. The incidence of infertility is associated with geographic differences and varies from country to country. It has been also observed that the causes are related to demography also. Age is the most important factor affecting a woman's chance to conceive and have a healthy child. A woman's fertility starts to decline in her early 30s, with the decline speeding up after 35. This is due to the ovulation problem that can happen as a woman gets older. National Family Health Survey (NFHS) estimates childlessness as 2.4% of married women over 40 in India MCH and Family Planning, India, 1995. The aim of the present study was to observe the relation of demographic factors with infertility.

MATERIALS AND METHODS

This observational study was carried out from 1st June 2016 to 31st May, 2017 at the Department of Obstetrics and Gynaecology, Gauhati Medical College, Guwahati, Assam. Required approval of Institutional Ethical Committee was obtained. Forty-two married women with infertility (24 primary and 18 secondary) who reported at OPD of GMCH were included for this study. Couples who had not lived together for at least 12 months and couples with male factor infertility were excluded from the study. A special proforma was designed for collecting patient's details. Data like type of infertility, age, religion, occupation, residency status, married for (in years) and duration of infertility were recorded for all the infertile women. The data are presented in tables and graphs.

RESULTS

Out of 42 patients, 24 cases (57.5%) consisted of primary infertility and 18 cases (42.86%) consisted of secondary infertility.

Table-1: Distribution of patients according to occupation, religion and residency status

Characteristics		No. of patients	Percentage
Occupation	Service	11	26.19
	House wife	31	73.81
Religion	Hindu	30	71.43
	Islam	12	28.57
Residency status	Rural	28	66.67
	Urban	14	33.33

Demographic data like occupation, religion and residency status of the infertile patients are presented in Table 1. Out of the 42 patients studied, 11 (26.19%) were service-holder and 31 (73.81%) were house wife. A total of 30 patients (71.43%) belonged to Hindu and 12 (28.57%) belonged to Islam religion. Regarding residence, 66.67% of the couples lived in rural areas and other 33.33% lived in urban areas.
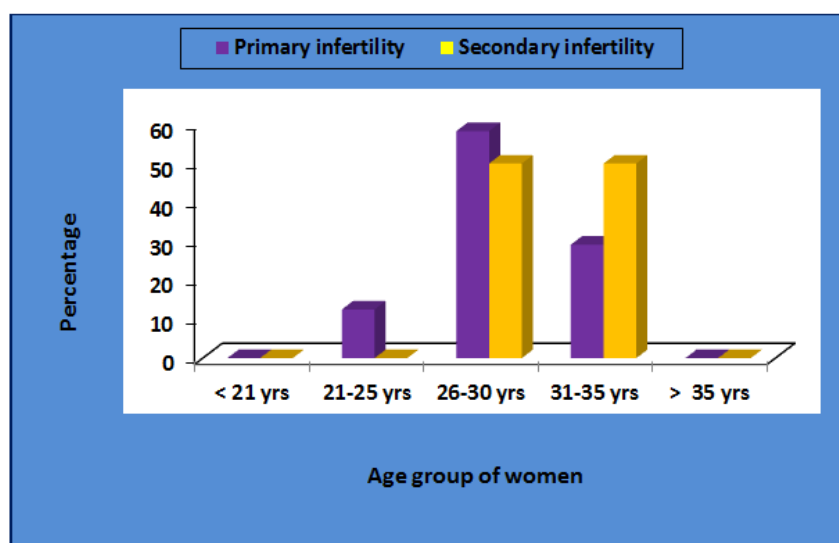

Fig-1: Distribution of cases according to age group of women

In case of primary infertility, age of the patients ranged from 21 to 35 years. Largest number of patients (58.33%) was in the age group 26-30 years. There was no patient belonging to the primary group below 21 years and above 35 years (Fig.1). Out of 18 cases of secondary infertility, 50% belonged to age group 26-35 years and other 50% belonged to 31-35 years group (Fig.1). Thus maximum infertile women coming to the GMCH belonged to the age group 26-30 years. We did not observe any patient with secondary infertility below 26 years and above 35 years.

Table-2: Distribution of cases according to duration of infertility at the time of presentation

Duration of infertility (years)	Frequency of infertility			
	Primary infertility (n=24)		Secondary infertility (n=18)	
	No	Percentage	No	Percentage
2-3	14	58.33	7	38.89
4-5	5	20.83	8	44.44
6-7	4	16.67	1	5.55
8-9	1	4.17	0	0
9-10	0	0	1	5.55
>10	0	0	1	5.55

Table 2 shows the distribution of cases according to duration of infertility at the time of presentation. As per the period of infertility is concerned, majority of the cases (34 out of 42 cases) were brought to hospital within 2-5 years of infertility. Out of 24 cases of primary infertility, majority (58.33%) had history of infertility for 2-3 years. A few number of cases (5 cases) had a history of infertility for 6-9 years. Duration above 9 years was not observed for primary infertility. In the secondary infertility, the

maximum number of cases i.e., 8 (44.44%) had infertility for 4-5 years. However, most of the secondary infertile women had 2-5 years duration of

infertility. Two cases (11.11%) had infertility for 9 years and above.

Table-3: Demographic profile of women with infertility

	Primary infertility	Secondary infertility	P
	mean±SE	mean±SE	
Age at presentation (years)	29.25±3.38	31.11±2.91	0.068
Duration of infertility (years)	3.79±1.89	4.61±2.89	0.273

Average age of patients and average duration of infertility is presented in Table 4.The mean age of presentation with primary infertility was 29.25±3.38 years as compared with 31.11±2.91 years in those with secondary infertility. The patients in secondary infertility group were slightly older compared to primary group (29.25±3.38 vs. 31.11±2.91years, *P*< 0.068). The average duration of infertility for the 42 patients was between 4 and 4.5 years, 3.79±1.89 years for primary as compared with 4.61±2.89 years for secondary (*P*< 0.273).

DISCUSSION

Majority of the infertile women were from rural areas and house wife. As this is a government hospital, people from villages who belong to the lower income group might have preferred this hospital. Moreover, there is lack of facilities for detection of cause of infertility in the primary health centres of rural areas. It was observed that 30 (71.43%) infertile patients belonged to Hindu religion and 12 (28.57%) belonged to Islam religion. This is because Hinduism is the main religion in this state.

In a study conducted by Roupa *et al*. [2] at Greece, it was observed that 35% of the participants were employees in the private sector, 27% in the public sector, 24% self-employees and 14% dealt with household. They interpreted that women who work, are well informed and receive various stimuli in the working environment, which makes them face assisted reproduction in a more positive way [2].

Of the 42 women studied over a span of one year, 24 (57.14 %) presented with primary infertility and 18 (42.86%) with secondary infertility. Of the 42 women studied over a span of one year, 24 (57.14 %) presented with primary infertility and 18 (42.86%) with secondary infertility. Incidence of primary and secondary infertility varies from author to author and also from place to place. The study by Roupa *et al*. [2] opined that incidence of infertility is associated with geographic differences.

Age is the single most important determinant of spontaneous as well as treatment-related conception. Because of the natural process of ageing in ovaries, it cannot produce quality ova, so natural pregnancy rate significantly reduces towards advancing age. While

there is no universally accepted definition of advanced reproductive age, 35 years is considered as the limit in fertility terms by American Society of Reproductive Medicine [3].

In case of primary infertility, age of the patients ranged from 21 to 35 years. In a study conducted by Dutta and Guha [4], it was reported that age of patients varied from 18-38 years. The reason may be increase in age at the time of marriage. In the present study, highest number of infertile patients was found in the age group 26-30 years followed by age group of 31-35 years. In a study of 100 patients, Sharma *et al.* [5] also observed that the commonest age group was 26-30 years followed by 31-35 years. This also coincides the studies of Shetty and Shetty [6-8]. In the present study, the mean age of women with primary infertility was 29.25±3.38 years as compared to 31.11±2.91 years in those with secondary infertility. It is comparable with the study where it was reported that the mean age was 28.3 years and 31.8 years for primary and secondary infertility respectively [6]. The patients in the secondary infertility group were slightly older compared to primary group. This was observed by other workers also [6, 9, 10].

The t-test result regarding mean age of patients was highly significant indicating that it is not conforming to the mean age of the infertile population. This is due to the small size of the sample in the present case. Our mean age of the primary infertility group is higher than most of the previous studies because there has been a rise in age at the time of marriage with higher educational status.

In case of primary infertility, majority (58.33%) had history of infertility for 2-3 years. In secondary infertility, maximum number of women i.e., 8 (44.44%) had infertility for 4-5 years. It is comparable with duration of infertility reported by various workers. Several unsuccessful attempts at achieving a pregnancy lead newly married couples to become alarmed and they usually come for investigation early. On the other hand, couples living with one living issue are not very anxious and usually turn up late for investigation.

Mean duration of infertility was 3.79±1.89 years for primary as compared with 4.61±2.89 years for secondary (*P*< 0.05). A study found 4.8 years in

primary infertility and 4.2 years in secondary infertility [13]. Higher mean duration than the present study i. e., 6.8±5 years for primary and 8.32±4.6 years for secondary (p=0.024) was also reported [11]. This may be due to the reason that they had recorded the average age of married life.

CONCLUSION

Female infertility is a complex problem that should be considered by the government especially by those countries with demographic problems, in order to find effective interventions and solutions because childbearing and family are considered a right of every human being. One of the most common risk factor of infertility is age. Those couples wanting to have children should take into consideration this factor and plan accordingly. In case of unsuccessful attempts, they should seek medical help before the duration of infertility becomes long. Modern medical science has developed advanced therapies to assist reproduction.

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