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RESEARCH ARTICLE

PREVALENCE AND CAUSES OF FEMALE INFERTILITY IN CHENNAI

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ABSTRACT

Infertility is defined as failure to conceive despite one year of cohabitation and exposure to pregnancy, by the World Health Organization (1991). It is acquiring a proportion of global widespread prevalence of approximately 8-12%.Patient records from these fertility clinics were analysed and 2112 women out of 3051 women were identified as being infertile with the major cause being Polycystic ovary syndrome. The treatment modalities offered to these women were IUI and ICSI. This study aims to create awareness about it and its early detection as the treatment modalities are expensive.

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INTRODUCTION

Infertility is defined as failure to conceive despite one year of cohabitation and exposure to pregnancy, by the World Health Organization (1991). It is acquiring a proportion of global widespread prevalence of approximately 8-12%. (Ajeet Vasant Saoji, 2014) According to the World Health Organization (WHO), 60 to 80 million couples worldwide currently suffer from infertility. (Sciarra, 1994) Using the "age but no birth" definition, the WHO estimates of primary infertility in India are 3.9 % (age-standardized to 25-49 yr) and 16.8% (age standardized to 15-49 yr). (World Health Organization, 2004) A study done by the WHO claimed that one in every four couples had been found to be infertile, in developing countries. (Mascarenhas *et al*., 2012) The 1981 census of India estimated infertility to be in the range of 4-6%. (Department of Family Welfare, 1995) An estimate of overall primary and secondary infertility was done in South Asia. This was based on women at the end of their procreative lives in the age group 45-49 years, suggests an infertility rate of approximately 10%: 8% in India, 10% in Pakistan, 11% in Sri Lanka, 12% in Nepal and15% in Bangladesh. (Farely and Baisey, 1998) A global review of infertility from the World Fertility Survey and others assessed similar rates of infertility in other backgrounds in South Asia, such as 6% in Nepal, 4% in Bangladesh, 5% in Pakistan and 4% in Sri Lanka. (Vaessen, 1984) The problem of infertility in India has not been given much importance as it is not a life-threatening condition. Infertility is a life crisis with invisible losses, and its consequences are manifold. Barrenness and infertility are no longer private sorrows. These are rising in cities intensely. Based on the census reports of India 2001, 1991, 1981 researchers show that childlessness in India has risen by 50 per cent since 1981. (Niharika Tripathi) Total infertility is divided into primary and secondary infertility, where secondary infertility refers to the inability to conceive following a previous pregnancy. Globally, most infertile couples suffer from primary infertility. (Inhorn, 2003) Despite new reproductive technologies being available (IVF) mostly in cities, large majority of the population cannot afford infertility treatment due to its high cost. (Ajeet Vasant Saoji, 2014) Infertility may not be a threat to physical health but conveys with it psychological and extremely adverse social implications. Because of their infertile status, they suffer physical and mental abuse, neglect, abandonment, economic deprivation and social ostracism as well as exclusion from certain social activities and traditional ceremonies. (Jumayev *et al*., 2012)

Both partners in relationship contribute to potential fertility and both may be sub-fertile. The female factors contribute almost half in the etiologies of infertility followed by male factors (30-40%), and the rest are attributed to a combination of both or by problems unknown. (Kanal and Sharma, 2006) Identifiable factors affecting female infertility include tubal factors (occlusions, pelvic adhesions and other tubal abnormalities), endocrine disturbances (menstrual or ovulatory disturbances), sexual dysfunction, acquired non-tubal factors (cervical or uterine disturbances) and congenital abnormalities. In addition to the core prevalence of infertility due to physiological

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conditions, additional cases are caused by the incidence of preventable conditions such as infection, "lifestyle factors", advancing maternal age, age at marriage, postponement in child bearing for more than 1 year or more, socio-economic status, and occupational hazards. (Ajeet Vasant Saoji, 2014)

In India where, traditionally, having children is mandatory in terms of family happiness and many people still think of infertility as a "woman's problem", this problem acquires crucial social actuality. Thus, the purpose of this paper is to analyse the age prevalence of infertility and its causes to create awareness about it and its early detection as the treatment modalities are expensive.

MATERIALS AND METHODS

The present cross sectional study was conducted in the urban field practice area of few fertility clinics in Chennai. Patient records from these fertility clinics were analysed and age prevalence was estimated along with the causes. The treatment modalities were assessed. Results were depicted in the form of Charts.

RESULTS

A total of 3051 women visited the fertility clinics in a span of one year. The 3051 women consulted fertility experts with the complaint of not being able to conceive (infertile). Out of this, 2112 women were identified as being infertile. The ages of these women ranged from 18-49. The age prevalence in this study area was, 48 women of the ages. 18-19, 852 number of women were in their 20s, 1104 women belonged to the age group of 30s and 108 women were in their 40s. (Chart 1)

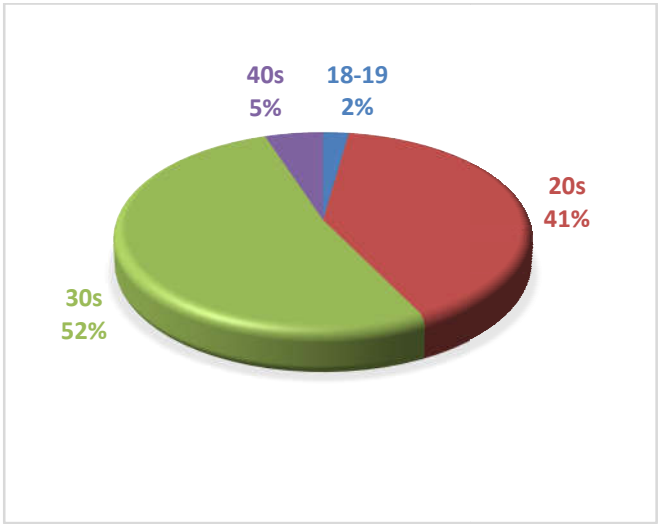

CHART – 1

The causes of infertility reported among these women were usually due to endometriosis, menstrual irregularities, sexually transmitted infections, polycystic ovary syndrome, due to their extravagant lifestyle, etc. (Chart – 2)

CHART – 2

The treatment plans offered to women suffering from the problem of infertility were ICSI (Intra-cytoplasmic Sperm Injection) and IUI (Intra Uterine Insemination). The treatment modality chosen for 888 women was ICSI, followed by 1224 women for IUI. The number of people in each age groups for both the treatments is seen in Chart 3 and 4. In ICSI, 336 women were in their 20s, 444 women in their 30s and 108 women belonged to the age group, 40s.

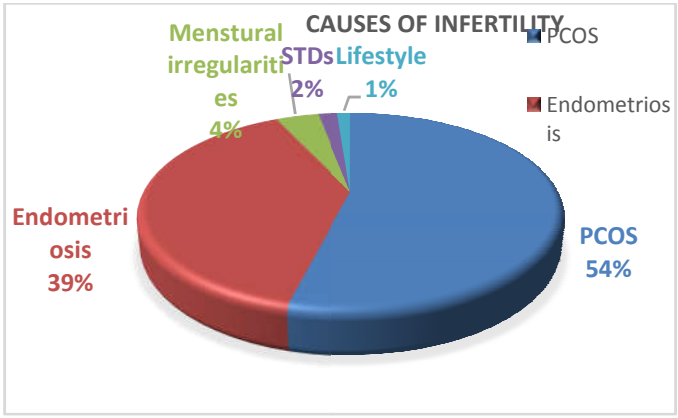

CHART – 2

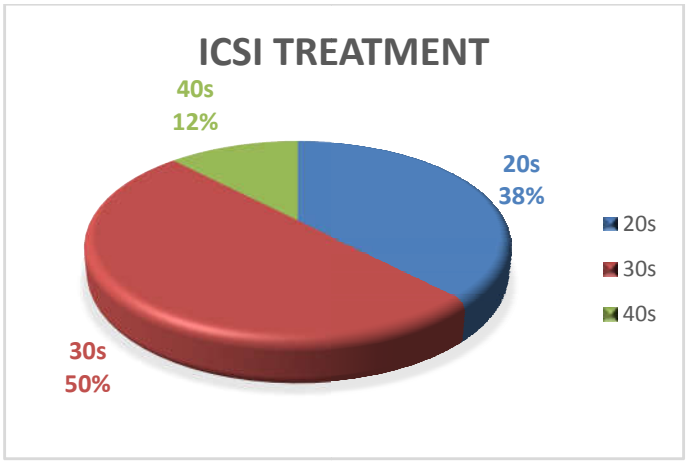

CHART – 3

Considering IUI treatment, 516 patients were in their 20s, 660 in their 30s and 48 women were in the age group of 18 to 19.

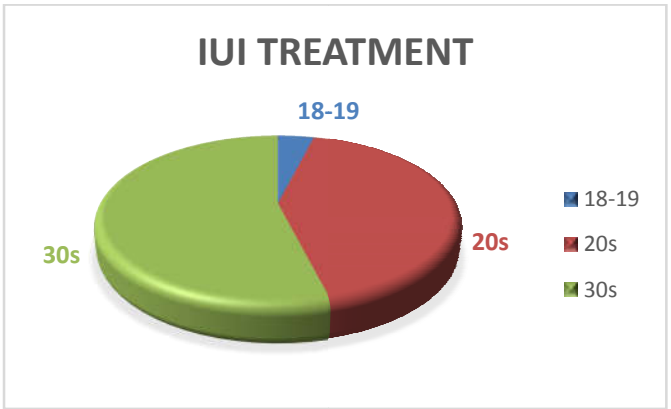

CHART – 4

DISCUSSION

The 1984 Warnock report commented on the lack of statistics on infertility. (Warnock, 1984) In this study, infertility was tried to be described. However, it is not a complete picture of infertility either in the whole population or of any fixed

duration. We have described a minimum picture, expressed by the annual attendance of new couples at fertility clinics. A total of 2112 women being identified as infertile from the 3051 visiting the clinic raises a red flag. The remaining 939 women came in with a complaint of being infertile but were diagnosed as normal. This states that the common population are unaware of the definition of infertility being, "failure to conceive despite one year of cohabitation and exposure to pregnancy." Due to this low level of awareness, many women consulted doctors within few months of exposure to pregnancy. Considering the age prevalence of infertility among the 2112 women, the maximum number of patients were in the age group of 31 to 40 followed by 852 women in their 20s. This result was unexpected as previously only 40+ women visiting fertility clinics was the norm. Due to an extravagant lifestyle, women in their 20s and 30s tend to suffer from the problem of infertility. Unhealthy weight gain can negatively impact the reproductive system, leading to difficulties in conceiving. Hence lifestyle modifications such as disciplined eating habits, increased level of daily physical activity and regular exercise are important for maintaining a healthy body weight. Obesity proved to be significantly associated with primary infertility in present study and this result indicates that the obesity is an important factor that is congruent with some national and international studies. (Seddigheh *et al*., 2013; Sudha *et al*., 2009) 2% of the women were identified as being infertile, this might be genetic, due to PCOS. The common features of PCOD are irregular or anovulatory cycles with signs of hyperandrogenism like acne, seborrhoea, hirsutism, alopecia, frank virilisation, and with polycystic ovaries onpelvic sonography. (Priyanka Shenoy *et al*., 2016) Considering the causes of infertility, PCOS was the most prevalent followed by endometriosis and menstrual irregularities. Study conducted by Shamila *et al*. (1986) on risk factors affecting female infertility in South Indian districts of Tamil Nadu and Kerala opine that there was a positive correlation between infertility and menstrual irregularity Assessing the treatment modalities, IUI technique was not opted for women in their 40s as there was a high possibility of a negative outcome of the treatment. Similarly, women the age group 18-20 were not treated by ICSI technique. infertile women reported higher family incomes than fertile women, consistent with previous findings in India. (Shamila *et al*., 1986) It is likely that women from higher income families were able to access healthcare because they could afford to pay for services more than women from lower income families.

Conclusion

Medical case studies, escalating incidence as well as the rising number of infertility clinics in urban areas of the country are pointing to the fact that infertility is becoming a health challenge in the country. (Ajeet Vasant Saoji, 2014) This study has provided significant information concerning the prevalence of infertility in our area & has informed about different demographical & etiological factors associated with infertility. As infertility treatment is very costly identifying the risk factors may be of benefit to Indian couples. Efforts are needed to raise awareness of the causes and consequences of infertility. (Mittal *et al*., 2015) Due to a changing lifestyle in this generation, the risk factors of infertility is on a high rise with young women in their reproductive age being diagnosed infertile. Thus, there is a need for lifestyle modification along with better screening for the same. Efforts are needed to raise awareness of the causes and consequences of this condition.

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