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A Clinical Analysis of Infertility

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ABSTRACT
Infertility in India touches many lives, silently challenging societal norms. Couples facing this struggle often endure social stigmas, highlighting the need for increased awareness and empathy. Despite advancements in medical treatments, accessibility and affordability remain key barriers. The aim of this study was to analyze clinical pattern of infertility among couples visiting our infertility clinic. The present study was a hospital based observational study which included 200 couples presenting to our infertility clinic. After obtaining consent, all the necessary demographic and clinical data was collected. The data was collected in MS Excel and presented as numbers and percentages in the form of tables and figures. More than two-thirds (69.5%) of the women were of the age group 21-30 years. Nearly half of the women selected for this study (49%) were married for a period of 2-7 years. Most of the women were Nulliparous (68%). 68% of women from the study had regular menstrual history while nearly one-third (32%) of women had irregular menstrual history. Almost three-fourths (74%) of women considered for this study had normal gynecological history, while 12% had PCOS and 4% had fibroids. Endometriosis, Ovarian cyst and Structural defect were each present in the gynecological history of 1% of women. Seven percent of women had other gynecological issues. 80% of the women from this study exhibited normal HSG findings, while 1 tube was blocked in 14% of women and both tubes were blocked in 6% of women. Infertility exhibits diverse etiological patterns worldwide, with both male and female factors playing pivotal roles. Hence, it is imperative to provide thorough counseling and conduct meticulous investigations for both partners. By tailoring the approach to each case's specific issues; we can enhance the prospects of achieving successful outcomes in addressing fertility challenges.

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Key Words
Infertility, couple, female factor, analysis

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INTRODUCTION

In India, infertility has a complex medical backdrop influenced by factors such as lifestyle, delayed marriages and reproductive health issues. The prevalence of conditions like polycystic ovary syndrome (PCOS) and male factor infertility contributes to the challenge. Limited awareness, coupled with uneven healthcare accessibility, underscores the importance of targeted medical interventions and educational initiatives. Addressing infertility in India necessitates a multifaceted approach, incorporating medical advancements, public health measures and societal awareness[1].

Infertility is medically defined as the inability to conceive after a year of regular unprotected intercourse. There are two main types: primary infertility, where a couple has never conceived and secondary infertility, where a couple has conceived before but is struggling to conceive again[2]. Causes of infertility vary, encompassing both male and female factors such as hormonal imbalances, structural issues and genetic abnormalities. Common causes include ovulatory disorders, tubal factors, male factor infertility and age-related factors[3]. Management approaches range from lifestyle modifications and fertility medications to assisted reproductive technologies (ART) like in vitro fertilization (IVF) and intrauterine insemination (IUI)[4]. Diagnostic procedures, such as hormonal assays, imaging studies and semen analysis, help identify specific causes. The emotional and psychological aspects of infertility are integral considerations, often addressed through counseling and support groups. Understanding the diverse factors contributing to infertility allows for a tailored and holistic approach to its management in the medical realm[5,6].

Research on infertility in India is crucial to understand and address the unique socio-cultural, environmental and genetic factors contributing to the issue. Identifying region-specific causes and prevalence rates can guide the development of targeted interventions and accessible healthcare solutions. Such research not only advances medical knowledge but also plays a vital role in shaping public health policies to effectively combat infertility challenges in the Indian context[7].

MATERIALS AND METHODS

Study Setting: The present study was conducted at the Department of Obsteterics and Gynecology, Khaja Banda Nawaz University Hospital, Karnataka.

Study Design: The present study was a Hospital based observational study.

Study Sample: The present study included 200 couples presenting to our infertility clinic.

Inclusion Criteria: Couples diagnosed with infertility and who consented were included in the study.

Exclusion Criteria: Couples who did not consent were excluded from the study.

Methodology: After obtaining consent, all the subjects underwent detailed history taking, thorough clinical examination and necessary investigations. Data was collected in MS Excel, analyzed and presented as tables and figures.

Statistical Analysis: Data was collected in MS Excel and presented as numbers and percentages in the form of tables and figures.

RESULTS AND DISCUSSION

Research on infertility is essential for uncovering new insights into its causes, treatments and prevention strategies. Investigating genetic, environmental and lifestyle factors contributes to a more comprehensive understanding of infertility's complexities. Advancements in infertility research pave the way for improved diagnostic methods, treatment options and enhanced support for individuals and couples facing reproductive challenges.

A total of 200 women were selected for this study. More than two-thirds (69.5%) of the women were of the age group 21-30 years. Nearly one-fourth (22%) women fell into the age group 31-40 years. 5% of the women were less than 20 years old and only 3.5% of women were more than 40 years old. Nearly half of the women selected for this study (49%) were married for a period of 2-7 years (Table 1). Eighteen percent of women were married for 8-13 years and 17% were married for less than 2 years. Only 9% of women were married for a period of 14-19 years, while mere 7% were married for more than 19 years (Table 2). The 200 women considered for the study, more than two-thirds (68%) were Nulliparous, while 19% were Primiparous and only 13% were Multiparous (Table 3). More than two-thirds (68%) of women from the study had regular menstrual history while nearly one-third (32%) of women had irregular menstrual history. Almost three-fourths (74%) of women considered for this study had normal gynecological history, while 12% had PCOS and 4% had fibroids (Table 4). Endometriosis, Ovarian cyst and Structural defect were each present in the gynecological history of 1% of women. Seven percent of women had other gynecological issues

(Table 5). 80% of the women from this study exhibited normal HSG findings, while 1 tube was blocked in 14% of women and both tubes were blocked in 6% of women (Table 6). Similar resukts have also been reported in studies done by Singh *et al*.[8].

Table 1: Age

Age Group	No. of women (%)
<20 years	10 (5.0)
21-30 years	139 (69.5)
31-40 years	44 (22.0)
>40 years	7 (3.5)
Total	200 (100)

As depicted above, the most common age group was 21-30 years

Table 2: Duration of Marriage

Duration of Marriage	No. of women (%)
<2 years	34 (17)
2-7 years	98 (49)
8-13 years	36 (18)
14-19 years	18 (9)
>19 years	14 (7)
Total	200 (100)

Almost half of the study population had been married for 2-7 years

Table 3: Parity

Parity	No. of women (%)
Nulliparous	136 (68)
Primiparous	38 (19)
Multiparous	26 (13)
Total	200 (100)

Parity of our study participants has been described in above table

Table 4: Menstrual History

Menstrual History	No. of women (%)
Regular	136 (68)
Irregular	64 (32)
Total	200 (100)

Table 5: Gynecological History

Gynecological History	No. of women (%)
Normal	148 (74)
PCOS	24 (12)
Fibroids	8 (4)
Endometriosis	2 (1)
Ovarian Cyst	2 (1)
Structural Defect	2 (1)
Other	14 (7)
Total	200 (100)

Almost two-thirds of the women included in the study had no signifacnt gynecological history

Table 6: HSG

HSG	No. of women (%)
Normal Study	160 (80)
1 Tube Blocked	28 (14)
Both Tubes Blocked	12 (6)
Total	200 (100)

Hysterosalpingography findings of our study participants are described in the above table

CONCLUSION

Research on infertility in India is crucial to understand and address the unique socio-cultural, environmental and genetic factors contributing to the issue. Identifying region-specific causes and prevalence rates can guide the development of targeted interventions and accessible healthcare solutions. Such research not only advances medical knowledge but also plays a vital role in shaping public health policies to effectively combat infertility challenges in the Indian context.

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