



A CROSS SECTIONAL STUDY ON ETIOLOGY OF FEMALE INFERTILITY

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ABSTRACT

AIM AND OBJECTIVES This study was a Non-Randomized cross sectional study conducted in the department of obstetrics and gynaecology during JAN2017 to DEC2017 in Sri Balaji Medical College & Hospital, Chrompet, India. In this period 43 women who has attended the OPD for infertility were evaluated, examined and investigated to find out the cause for infertility. The results were analysed. In our study majority of the women who presented with infertility were belonging to the age group between 24 – 30 years. **RESULTS AND OBSERVATION** Among 44.2%(19/43) of women who had irregular menstrual cycle, majority of the women had PCOD and the others had pathology in uterus like fibroid, adenomyosis and endometriosis. Among 30.2%(13/43) of women who presented with foul smelling vaginal discharge, 23.2%(10/43) had pelvic inflammatory disease. In our study population of 43 women, 37.2%(16/43) was on ovulation induction and 9.3%(4/43) had underwent laparoscopy. Among the study population, About 16.3%(7/43) had diabetes mellitus, 7%(3/43) had hypothyroid and 4.7%(2/43) were known case of tuberculosis and treated. All these co-morbidities are strongly associated with infertility. Majority of the women, about 46.5%(20/43) were of normal BMI between 18.5-24.9kg/m², 41.9%(18/43) were overweight with BMI 25-29.9kg/m² and 11.6%(5/43) were obese with BMI more than 30kg/m². PCOD is also easily treatable and the prognosis is good when compared to the other causes of infertility. Next major cause of female infertility is tubal block which is due to PID, DM and TB. Endometriosis is also found in some female presenting with infertility. Outcome is poor in this group of people as it is not completely treatable.

KEYWORDS : PCOD, infertility, endometriosis, PID

INTRODUCTION:

Infertility is the inability of a couple to achieve pregnancy over an average period of one year (in a woman under 35 years of age) or 6 months (in a woman above 35 years of age) despite adequate, regular, unprotected sexual intercourse. Infertility may also be referred to as the inability to carry a pregnancy to the delivery of a live baby. In primary infertility, the couples have never been able to conceive; while in secondary infertility there is difficulty in conceiving after having conceived earlier.^(1,3)

AIMS AND OBJECTIVES

To estimate the prevalence of causes of female infertility.

To study the different factors responsible for female infertility.

MATERIALS AND METHODS:

This is a Non-Randomized cross sectional study over a period of One year 43 women with history of infertility attending OG outpatient department, from Jan 2017 to Dec2017 taking in to consideration of inclusion and exclusion criteria.

g. Scientific basis of sample size used in the study:

$4pq/d^2 = 42.85$ $p = 70\%$, $q = (100 - p)$, $d = 20\%$ of p (Moghadamet al.(2013), in Epidemiology of Female Infertility studied Polycystic ovary syndrome causes infertility in young women and provides 70% of ovulation infertility, and 15.6% of primary infertilities.

Inclusion criteria:

- Women attending gynecology outpatient department with following criteria:
- age 20 to 40
- married for > 1 year and living with husband
- not using any contraception
- Couples who fail to conceive following a previous pregnancy, in the absence of contraception,

Exclusion Criteria:

- Those who are not willing to participate
- Women on In Vitro Fertilization (IVF) treatment

RESULTS:

Assesment of demographic data

Table-1 : Distribution of patients according to age

Age	No. of patients	Percentage
24 yrs - 30 yrs	25	58.1
31 yrs - 35 yrs	15	34.9
36 yrs - 40 yrs	3	7.0
Total	43	100.0

According to the above table maximum number of patients who came with complaints of infertility were in the age group between 24 – 30 years, that is 58.1% (25/43) and 34.9%(15/43) were of 31 – 35 years. Only 7% (3/43) were in the age group between 36 – 40 years.

Table-2: Distribution of number of patients according to Socio economic status

Socio economic status	No. of patients	Percentage
Middle	2	4.7
Upper middle	41	95.3
Total	43	100.0

Assesment of history

Table-3 : Distribution of number of patients according to their years of marriage

Married for yrs	No. of patients	Percentage
<5 yrs	17	39.5
5-10 yrs	22	51.2
> 10 yrs	4	9.3
Total	43	100.0

Among the study 51.2%(22/43) were married for 5-10 years and 39.5%(17/43) were married for less than 5 years. Only 9.3%(4/43) were married for more than 10 years.

Table-4: Distribution of number of patients according to Menstrual cycle

Menstrual cycle	No. of patients	Percentage
Regular	24	55.8
Irregular	19	44.2
Total	43	100.0

Table-5 : Distribution of number of patients according to the Treatment for Infertility

Treated for Infertility	No. of patients	Percentage
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Ovulation induction	16	37.2
Laparoscopy	4	9.3
None	23	53.5
Total	43	100.0

Among the 43 infertile women 37.2%(16/43) were on ovulation induction and 9.3%(4/43) had underwent diagnostic laparoscopy. 53.5%(23/43) were not on any treatment

Table-6: Distribution of number of patients according to co-morbidities

Co- morbidities	No. of patients	Percentage
DM	7	16.3
Hypothyroid	3	7.0
TB	2	4.7
None	31	72.1
Total	43	100.0

In our study 16.3%(7/43) were diabetic, 7%(3/43) were hypothyroid and 4.7%(2/43) were known case of tuberculosis. Remaining 72.1%(31/43) were without any co-morbidities.

Table-7: Distribution of number of patients according to Family H/O of Infertility

Family H/O	No. of patients	Percentage
Present	10	23.3
Absent	33	76.7
Total	43	100.0

Assesment of general and vaginal examination :

Table-8: Distribution of number of patients according to BMI

BMI	No. of patients	Percentage
18.5-24.9	20	46.5
25-29.9	18	41.9
>30	5	11.6
Total	43	100.0

In our study, majority of the women, about 46.5%(20/43) were of normal BMI between 18.5-24.9kg/m², 41.9%(18/43) were overweight with BMI 25- 29.9kg/m² and 11.6%(5/43) were obese with BMI more than 30kg/m².

Table-9: Distribution of number of patients according to Pelvic Examination

Pelvic Examination	No. of patients	Percentage
Normal	23	53.5
Foul smelling vaginal discharge	12	27.9
Fornices tender restricted mobility	4	9.3
Bulky uterus	4	9.3
Total	43	100.0

Among the study group, on per vaginal examination 27.9%(12/43) had foul smelling vaginal discharge, 9.3%(4/43) had forniced tenderness and restrictd mobility of uterus, 9.3%(4/43) had bulky uterus.

Assesment of radiological findings

Table-10: Distribution of number of patients according to USG

USG	No. of patients	Percentage
Normal	14	32.6
PCOD	21	48.8
Fibroid	3	7.0
Adenomyosis	1	2.3
Chocolate cyst	4	9.3
Total	43	100.0

Among 43 women in our study group 48.8%(21/43) had PCOD, 7%(3/43) had fibroid uterus, 2.3%(1/43) had adenomyosis, 9.3%(4/43) had endometriotic chocolate cyst and remaining

36.2%(14/43) patient's USG were normal.

Assesment of Hysteroscopic findings

Table-11: Distribution of number of patients according to Hysteroscopy

Hysteroscopy	No. of patients	Percentage
Normal	38	88.4
Tubal block	5	11.6
Total	43	100.0

In our study, among 43 infertile women the hystrosopic findings were normal in 88.4%(38/43), whereas 11.6%(5/43) had tubal block.

Table - 12: Percentage of causes of female infertility

CAUSES OF INFERTILITY	PERCENTAGE
PCOD	41.8%
PCOD with DM	6.9%
TUBAL BLOCK	25.5%
• PID	• 11.6%
• DM	• 9.3%
• TUBERCULOSIS	• 4.6%
FIBROID UTERUS	6.9%
ENDOMETRIOSIS	9.3%
ADENOMYOSIS	2.3%
UNEXPLAINED	6.9%

CONCLUSION

- Infertility is the major issue which has been increasing in rate in this current era.
- Female factors of infertility should be evaluated thoroughly starting from the history, examination and investigations.
- COD is the major cause of female infertility which is increasing in rate due to lifestyle changes.
- PCOD is also easily treatable and the prognosis is good when compared to the other causes of infertility.
- Next major cause of female infertility is tubal block which is due to PID, DM and TB.
- Endometriosis is also found in some female presenting with infertility. Outcome is poor in this group of people as it is not completely treatable.
- There is a category called Unexplained Infertility whose cause for infertility is not known.

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