

Evaluation of various factors in women presenting with subfertility in a tertiary hospital, AP

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Abstract :

Background - Subfertility is any form of reduced fertility with prolonged time of unwanted non-conception. One in six couples have unwanted delay in conception out of which 50% of cases are correctable with simple remedies.

Aims and Objectives of the study: is to evaluate the prevalence of subfertility, various risk factors for subfertility in women presenting to our institute. To optimize investigations and treatment in these women.

Material and Methods-

Study design: Prospective study

This study was conducted at OBGYN department, Siddhartha Medical College, Vijayawada done during the period of 1.01.2022 to 31.12.2022 . 72 women presented to our Gynecology OP with complaint of anxious to conceive and desire of childbirth **were studied**and compared with 5 studies Netherlands, Pakistan, Rotherdam, London and Germany. 60% of couples in our study are in the age group of 20 to 30 years. Most of the women in our study presented with 2 to 4 years of subfertility.Factors contributed to subfertility are Anovulation 72%. Obesity 70%,Genital infection 41.6% and unexplained 16% and the results are similar to study 1, 2 and 3.IN present study,19.4% of cases conceived spontaneously with simple measures like explaining fertile period, coital frequency, avoidance of taboos, weight reduction, exercises, treatment of medical causes like hypothyroid, anaemia, etc . In Study2, out of 914 cases which were studied for 10 years, 23% conceived. Study 3 also had 17% of conception when 3029 cases of subfertility were studied..

Results -

Conclusion : Good evaluation of various factors is very much important to have better outcome and avoid unnecessary treatment.

Key words: Subfertility, infertile women,couple

Introduction: WHO defines **Subfertility as any form of reduced fertility with prolonged time of unwanted non-conception¹**. Infertility may be used synonymously with sterility with only sporadically occurring spontaneous pregnancies and sterility is absolute inability to conceive.

The terms subfertility and infertility are often used interchangeably, but they aren't the same. Subfertility is a delay in conceiving². Infertility is the inability to conceive naturally after one year of unprotected sexual intercourse. In subfertility, the possibility of conceiving naturally exists, but takes longer than average.

Relative subfertility¹ is most common than sterility and more than one factor contributes for the delay in conception One in six couples have unwanted delay in conception. Roughly half of these couples will conceive either spontaneously or with relatively simple advice or treatment¹. The other half remain subfertile and need more complex treatment, such as in vitro fertilisation and other assisted conception techniques; about half of these will have primary subfertility.

About 20% of subfertile couple, spontaneously conceive within one year of unprotected intercourse. Out of remaining 10%, 50% may conceive with in 36 months. After 48 months about 5% of the couple remain as infertile having spontaneous conception and the remaining need some treatment measures.^[3]

The likelihood of spontaneous conception is affected by age, previous pregnancy, duration of subfertility, timing of intercourse during the natural cycle, extremes of body mass, and pathology present

MATERIALS AND METHODS :

STUDYDESIGN: Prospective Observational study.

SAMPLESIZE: The study population included allsubfertile women who are anxious to conceive presenting to our Department of Obstetrics and Gynaecology, Government General Hospital, Siddhartha Medical College, Vijayawada.

STUDYPERIOD: From 1.01.2022to 31.12.2022.

INCLUSIONCRITERIA: all the subfertile women aged 20 to 35 years who are anxious to conceive presenting toGynecology outpatient

EXCLUSIONCRITERIA: Male factor, secondary infertility and infertily more than 5 years or women, above 35 years are excluded.

STUDY METHOD- COLLECTION OFDATA- The purpose of the study was explained to the participants. Signed consent was taken. Face to face interviews were conducted using the structured questionnaires, including history taking, physical, gynecological examination, transvaginal sonography examination, male factor evaluation, HSG, Ovulatory tests are done. Laparoscopy was done in selective cases. If no gross abnormality is found, the couple

were labelled as subfertile and simple remedies like weight reduction in obese, PCOS, Diabetic [Anovulation]. Counseling about Fertile period, Detection of medical conditions like hypothyroid and treating of genital infections

Results: Total number of subfertility cases studied- 72

Table 1 : Age wise distribution

<20 years	8 [11%]
20 - 30 yrs	43 [60%]
30 - 35 yrs	21 [29%]

Table 2 : Duration of Subfertility

Active marital life	No. of cases	Percentage
< 1 year	4	5.5%
1- 2 yrs	24	33%
2 - 3yrs	21	29%
3 -4 yrs	18	25%
4 -5 yrs	5	7.5%

Table : 3 Age at marriage

Age	No. of cases	Percentage
< or=20 years	24	33%
21 -25 yrs	26	36%
26- 30 yrs	16	23%
31 - 35yrs	6	8%

Table : 4 Socioeconomic status

Class	No.of cases	Percentage
Upper	6	8%
Upper middle	18	25%
Lower middle	21	29%
Lower	27	37%

Table 5: Etiological factors

Factors	No. of cases [percentage]
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Lack of knowledge of fertile period	44 [61%]
Coital problems	38 [52.5%]
Infrequent coital activity	45 [62.5%]
Lack of knowledge of sex	12 [16.6%]
Genital infections	33[41.6%]
Tubal block	6 [8%]
Anovulation	52 [72%]
Obesity	51 [70%]
Unexplained	12 [16%]

Table: 6- Clinical presentation

complaints	Number	percentage
Asymptomatic	11	15%
Menstrual irregularity	31	43%
Heavy menstrual bleed	28	39%
Abnormal Vaginal discharge	22	30%
Pain abdomen	35	48%

Table 7: BMI

BMI	No. of cases	Percentage
<19.9	6	8%
20- 24.9	15	21.5%
25 - 29.9	42	58%
> 30	9	13.5%

Table 8:Subfertile women conceived spontaneously with simple remedies

Duration of subfertility	No.of couples	No.of women conceived within study period
< 1 year	4	2 [50%]
1- 2 yrs	24	5 [20 %]
2 - 3yrs	21	4 [19%]
3 -4 yrs	18	3[16 %]
4 -5 yrs	5	1[20%]
Total	72	14[19.4%]

Analysis :

Study 1: Asifa Ghazi and Co. Dept. of OBG, DUHS Karachi - Subfertility - experience in a tertiary care hospital⁴

Study 2: J. Mariette Eimers & Co. in University Hospital, Netherlands 2004, American fertility Society Vol 61. No. 1 - Prediction of chance to conceive in Subfertile couples⁵

Study 3: Jan Williem & co in University Medical centre Rotherdham, Advance access publication Vol 23 No. 2, 2008 - Obesity affects spontaneous pregnancy chances in subfertile women⁶

Study 4: C. Gnoth, E. Godehardt, P. Frank-Herrmann, K. Friol, Jürgen Tigges, G. Freundl⁷

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Study 5 : Peter Braude, professor and head of department of women's health, Guy's, King's, and St Thomas's School of Medicine, London, and Alison Taylor, consultant in reproductive medicine and director of the Guy's and St Thomas's assisted conception unit - The ABC of subfertility 2003 Aug 23; 327(7412): 434–436⁸.

Factors		Present study	Study1	Study2
Age	<20 years	24 [33%]	34 [21%]	----
	20-25	26 [36%]	43 [27%]	163[17%]
	26-30	16 [23%]	49 [31%]	459[50%]
	>30	6 [8%]	30[18%]	255[27%]
Duration of subfertility ^s	< 1 year	4 [5.5%]	----	161[17%]
	1- 2 yrs	24[33%]	-----	221[24%]
	2 - 3yrs	21[29%]	-----	268[28%]
	3 -4 yrs	18 [25%]	-----	158[17%]
	4 -5 yrs	5 [7.5%]	-----	104[11%]
Causes	Lack of knowledge of fertile period	44 [61%]		
	Coital problems	38 [52.5%]		
	Infrequent coital activity	45 [62.5%]		
	Lack knowledge of sex	12 [16.6%]		

	Genital infections	33[41.6%]	42 [26%]	
	Tubal block	6 [8%]	51 [32%]	
	Anovulation	52 [72%]	27 [17%]	
	Obesity	51 [70%]		
	Unexplained	12 [16%]	19 [12%]	

Clinical presentation	Present study	Study1		
Asymptomatic	15%	30 [19%]		
Menstrual irregularity	43%	16 [10%]		
Heavy menstrual bleed	39%	-		
Abnormal Vaginal discharge	30%	42 [26%]		
Pain abdomen	48%	-		

	Present study	Study2	Study3	
No. of cases studied	72	914	3029	
Study period	1 year	10 years	1 year	
Outcome [women conceived during study period]	19.4%	23%	17%	

Discussion : This study is compared and analysed with 5 studies.

In our study 60% are in the age group of 20 to 30 years as it the fertile age and the couple are anxious to conceive and similar with age groups of study 1 and 2. 11% are less than 20 years age , out of which 2cases presented with menorrhagia and 2 cases had PCOD like picture. 30% of this group are overweight. All cases are counselled and advised physical activity, diet and reassurance.

Cases with subfertility with marital life of 5 years or less are studied.2 women are more than 30 years and presented within 1 year of marriage. 80 to 90 % of subfertile women are 1to 4 years of marriage.Similar results were found in study 2.

33% of women in this study are less than 20years at the time of marriage and 8% are more than 30 years.

In this study , majority have more than one etiological factor. 72% have anovulation, 8% tubal block diagnosed by HSG. Few cases who had long period of evaluation and treatment at other hospital were subjected to laparoscopy and diagnosed by chromotubation. Only 2 cases of mild endometriosis and 1 case of endometriotic cyst was diagnosed and treated with the help of laparoscopy. 70% are overweight and 4 cases are obese, 16% are grouped as unexplained infertility. 60% have good knowledge of fertile period. These results are compared with study 1, the percentage of genital infections were 26%, Anovulation 17% which is less than in our study.As this study is done 15 years back , which may indicate the lifestyle changes and changing trends in the etiological factors. In our study , most of the cases are overweight and relative anovulation is observed.

4 cases are less than 1year of subfertility of which 2 cases are above 30 years.

At the end of one year in our study, 19.4% of cases conceived spontaneously with simple measures like explaining fertile period, coital frequency, avoidance of taboos, weight reduction, exercises, treatment of medical causes like hypothyroid, anaemia, etc. In Study2, out of 914 cases which were studied for 10 years, 23% conceived. Study 3 also had 17% of conception when 3029 cases of subfertility were studied. We can conclude that,the subfertile couple after completion of fertility work up , the probability of spontaneous pregnancy within one year is around 20% which can avoid unnecessary interventions and treatment. It is also cost

effective

Conclusion: As each couple has a substantial chance of conceiving without treatment, relating the potential benefit of treatment to their chances of conceiving naturally is important to give a realistic appraisal of the added benefit offered by treatment options.^[7] We can conclude that, the subfertile couple after completion of fertility work up, the probability of spontaneous pregnancy within one year is around 20% which can avoid unnecessary interventions and treatment. It is also cost effective.

References

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