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INFERTILITY: STILL AN ENIGMA;
AN OVERVIEW OF INFERTILE COUPLES IN OUTPATIENTS OF GYNAE

DR. SAIMA QURESHI, FCPS
Assistant Professor of Gynae & Obst.
Independent Medical College
Faisalabad.

PROF. DR. MAHNAAZ ROOHI, FRCOG
Professor & Head Department of Gynae & Obst.
Independent Medical College
Faisalabad.

DR. SHAHIDA KHALIQ, FCPS
Assistant Professor of Gynae & Obst.
Independent Medical College
Faisalabad.

DR. NAZIA MUSSARAT, FCPS
Assistant Professor of Gynae & Obst.
Independent Medical College
Faisalabad.

ABSTRACT...Objectives: (1) To find out the major causative factors in primary versus secondary infertility in study group. (2) To suggest an easy plan of investigation for an infertile couple. **Study Design:** Descriptive study. **Setting:** Gynecology & Obstetric Unit in Independent University Hospital, Faisalabad. **Period:** Two years from Jan 2008 to Dec 2009. **Material & Methods:** Convenience sample technique was used to collect the patients. **Results:** Anovulation had contributed 20% in primary infertility and 16% in secondary infertility. Tubal factor was more common in secondary infertility. Male factor was 40% in primary infertility and 16% secondary infertility. **Conclusions:** Counseling, reassurance and efficient, timely and appropriate management plan is essential to minimize the distress of infertile couples.

Key words: Infertility, Primary vs Secondary Infertility, Time to Pregnancy (TTP), Unexplained Infertility.

INTRODUCTION

Infertility primarily refers to the biological inability of a person to contribute to conception[1]. The couple who has not conceived after 12 months is the lowest reference limit for time to pregnancy (TTP) by the world health organziation[2].

Couples with primary infertility have never been able to conceive while secondary infertility is difficulty to conceive after at least one conception[3].

About 15% of all couples experience difficulty in conceiving. Most couples (84 out of 100) conceive within a year[4]. Women of age 38 years conceive after three years of trying in 77 out of 100 cases[5].

About 26% of infertile couples have unexplained infertility[6]. The main etiological factors in infertility are anovulation 20% in primary and 15% in secondary infertility. Male factor contributes 25% in primary and 20% in secondary infertility. Tubal factor is 15% in primary while 40% in secondary infertility, endometriosis is 10% in primary and 5% in secondary infertility[7]. Semen analysis, assessment of ovulation and evaluation for tubal patency are the three major basic investigation aims for infertile couples. Medical treatment of infertility generally involves the use of fertility medication like (Clomiphene Citrate, Gonadotrophins), medical advice in the form of regularity of coitus, days of ovulation and conception, or advising home conception kits. The assisted reproductive methods like (ICSI, IVF, GIFT, ZIFT) are only used after the proper selection of patients and explaining the failure rates of these methods[8].

Marital discord often develops in infertile couples especially when they are under pressure to make medical decisions[9]. Partners may become anxious to conceive ironically increasing sexual dysfunction[10]. In closed social groups, a degree of rejection be others may cause considerable anxiety and disappointment[11].

OBJECTIVES

- To find out the major causative factors in primary versus secondary infertility in study group.
- To suggest an easy plan of investigation for an infertile couple.

MATERIAL AND METHODS

It was a descriptive study. Convenience sample technique was used to collect the patients. This prospective study was conducted at Obstetrics and Gynaecology unit of Independent University Hospital,

Faisalabad. Independent University Hospital, Faisalabad is a tertiary care hospital where annual attendance of outdoor patients in Gynaecology unit is >6,000 / year.

Duration

Two year study from Jan 2008 to December 2009.

Inclusion Criteria

All the patients with infertility who were attending gynae outdoor / indoor of Independent University Hospital were included in study period.

Exclusion Criteria

- Patients less than age 20
- Patients with age >40
- Patients with recognizable chronic illness like chronic renal failure, chronic liver failure, ischemic heart disease or cancer patients.

A total of (50) patients were included. Detailed through history and clinical examination including abdominal and vaginal examination was performed. Detailed abdomino pelvic ultrasound, semen analysis were done in all patients. Tubal patency assessment either by hysterosalpingography or laparoscopy were the main investigation tolls for the patients who were clomiphene resistant or had history highly suggestive of tubal factor.

RESULTS

This study presents certain important and interesting findings which may be helpful for making the management plans in our coming days.

STATISTICAL ANALYSIS

All the result of the study are analyzed by statistics 8.1. Chi-square Test was used to analyze the results.

The p-value (0.0156) is less than the 0.05, two factors are significant and concludes that the variability of the factors are not same.

DISCUSSION

This study highlights the main causes of infertility in a low socioeconomic group. This study was carried out in that social strata who are deprived from certain basic needs

	Primary		Secondary	
Age (Years)	**No.**	**%age**	**No.**	**%age**
20-25	09	36%	02	8%
26-30	06	24%	08	32%
31-35	05	20%	09	36%
36-40	05	20%	06	24%
Total	25	100%	25	100%

	Primary		Secondary	
Monthly Income	**No.**	**%age**	**No.**	**%age**
<10,000 Rs.	12	48%	10	40%
10-20,000	08	32%	07	28%
>20,000	05	20%	08	32%
Total	25	100%	25	100%

	Primary		Secondary	
Age at marriage (Years)	**No.**	**%age**	**No.**	**%age**
<20	04	16%	03	12%
20-30	17	68%	16	64%
31-40	04	16%	06	24%
Total	25	100%	25	100%

	Primary		Secondary	
Duration of infertility	**No.**	**%age**	**No.**	**%age**
<5 years	11	44%	06	24%
5-10 years	11	44%	15	60%
> 10 years	03	12%	04	16%
Total	25	100%	25	100%

	Primary		Secondary	
Clinical risk factors	**No.**	**%age**	**No.**	**%age**
Irregular menstruation	07	28%	10	40%
H/O Endometriosis	03	12%	02	08%
Previous H/O D & C	04	16%	09	36%
H/O Vaginal Infections	05	20%	10	40%
H/O Tuberculosis	01	04%	-	-
Previous H/O ectopic pregnancy	-	-	03	12%
Use of ovarian stimulation drugs	14	56%	20	80%
Total	25	100%	25	100%

	Primary		Secondary	
Examination Findings	**No.**	**%age**	**No.**	**%age**
Normal pelvic findings	15	60%	18	72%
Presence of vaginal discharge	05	20%	20	80%
Fixity of uterus	04	16%	07	28%
Adenexal Tenderness	05	20%	06	24%
Presence of mass	03	12%	05	20%
Total	25	100%	25	100%

Semen Analysis Report

	Primary		Secondary	
	No.	**%age**	**No.**	**%age**
Normal	15	60%	21	84%
Abnormal	10	40%	04	16%
i-Azopermia	03	12%	01	04%
ii-Oligospermia	09	36%	04	16%
iii-Asthenospermia	07	28%	03	12%
Total	25	100%	25	100%

Ultrasonography Findings

	Primary		Secondary	
	No.	**%age**	**No.**	**%age**
Normal	12	48%	13	52%
Fibroids	03	12%	02	8%
Endometriosis	02	8%	03	12%
PCOD	07	28%	04	16%
Ovarian Cyst / Mass	-	-	03	12%
Hypoplastic Uterus	01	4%	-	-
Total	25	100%	25	100%

Tubal Patency

	Primary		Secondary	
By HSG	**No.**	**%age**	**No.**	**%age**
Patent	10	41.6%	05	20.83%
Blocked	02	8.3%	07	29.16%
Total	12	50%	12	50%

Laparoscopic Findings

	Primary		Secondary	
	No.	**%age**	**No.**	**%age**
Uterine mass	02	08%	02	08%
Ovarian cyst / mass	03	12%	03	12%
PCOD	07	28%	03	12%
Adhesions	02	08%	04	16%
Hydrosalpinx	01	04%	04	16%

	Primary		Secondary	
By laparoscopy	**No.**	**%age**	**No.**	**%age**
Patent	10	41.6%	04	16.6%
Blocked	02	8.3%	08	33.3%
Total	12	50%	12	50%

Main causative factors in study group

	Primary		Secondary	
	No.	**%age**	**No.**	**%age**
Ovulatory problems	05	20%	04	16%
Tubal factor	04	16%	15	60%
Male factor	10	40%	04	16%
Endometriosis	03	12%	02	08%
Unexplained	03	12%	-	-
Total	25	100%	25	100%

	Value	Df	P-Value
Chi-square	12.25	4	0.0156

6 cell(s) have expected value less than 5.

of life. Patients were mostly illiterate but they were very much inquisitive about their problem. They wanted to solve their problem and after proper counseling they were cooperative in following instructions.

Most of the problems were due to lack of proper gynaecological consultation, improper or overuse of medicines.

Untrained health worker's opinion and manipulation.

Avoidance of certain baseline investigations.

About 36% of patients were of <25years of age. They usually had started their investigations within first 6 months of marriage and took undue ovulation induction drugs for a long period. This figure is contrary to the fact that about 84% of couples in general population conceive within 1 year and cumulative pregnancy rate is 92% after 2 years of marriage[4].

About 44% of patients with primary infertility and 24% of patients with secondary infertility present themselves for investigations within five years of marriage. 68% of patients with primary infertility and 64% of patients with secondary infertility were married between 20-30 years of age group. These findings are very close to the figures of most studies because it is the most favorable period of reproductive life. This may be because in many cultures, inability to conceive bears a stigma. In closed social groups a degree of rejection may cause considerable anxiety and sexual dysfunction[12].

About 60% patients with primary infertility and 72% of patients with secondary infertility have normal pelvic findings. 36% of patients with primary infertility and 52% of patients with secondary infertility have clinical findings of pelvic inflammatory disease. 12% of patients with primary infertility and 8% patients with secondary infertility have clinical evidence of endometriosis. There figures are very close to the findings of an evidence base study for management of endometriosis[13]. Polycystic Ovaries are said to be the main cause of anovulation, 28% of patients with primary infertility and 16% of patients with secondary infertility have this problem. These findings are almost similar to the study seen at www.advicepregnancy.com[14,7].
Male Factor of infertility had contributed the main causes of infertility in 40% of patients with primary infertility and 16% of patients with secondary infertility. These facts are very contrary to the studies of different centres[5,7] in which male factor contributes only 20-25%[7].

In our study, Tubal factor is also very much prevalent in patients of secondary infertility. Mostly patients were maltreated by untrained medical personals. These facts are very Similar to the study done at Bahawalpur by Kalsoom Akthar[15].

CONCLUSIONS

Infertility is a stressful situation for couples and efficient, timely and appropriate management plan is essential to minimize distress.

It is important for couples to be seen together by specialists who have particular interest and expertise in infertility management.

We also suggest that a detailed history and clinical examination including abdominal and vaginal examination is really important. We have seen number of patients who are taking clomiphene citrate tablets many times just like bunties but their clinical scenario is altogether different. Basic steps are taken to treat patients with infertility. It is suggested the following:

1. Detailed History of both partners
2. Detailed Clinical examination of both partners
3. Awareness about the fertile days of menstruation and frequency of coitus
4. Explanation of the risk of Obesity (BMI > 29 reduces fertility in both men and women)
5. Assessment of ovulation by Day 21 serum progesterone levels. Over95% of women with regular menstrual Cycles are likely to be ovulating
6. Semen Analysis:- Two semen analysis reports almost with a gap of three months
7. Ultrasonography of Female Pelvis
8. Evaluation of Tubal patency either by Hysterosalpingography or Laparoscopy:

I. In patients with Secondary infertility
II. In patients who have failed ovulation inductions for three cycles in primary infertility
III. In patients who have evidence of co-morbidities like endometriosis, PID, Fibroids or instrumentation by Dias or LHVs.

Counseling and Reassurance play a very important role in management of infertility.

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Correspondence Address:
Dr. Saima Qureshi, FCPS
Assistant Professor of Gynae & Obst.
Independent Medical College,
Faisalabad.
drsaima.qureshi@gmail.com

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PREVIOUS RELATED STUDIES

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The brave may not live forever, but the cautious don't live at all.

Ashley L.