



USE OF INTRAUTERINE INSEMINATION FOLLOWING FOLLICULAR STUDY IN TREATMENT OF INFERTILITY

Obstetrics & Gynaecology

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ABSTRACT

Introduction: IUI first described in 1939 refers to direct transfer of sperms to the intra uterine cavity. It bypasses cervical barrier and disposing large no of washed motile spermatozoa directly in to the uterus. **Aims and Objectives:** Increase pregnancy rate of infertile couples following IUI with washed sperms. To diagnosed the cause of infertility and identified factor like male female unexplained and mixed cause. **Material and methods:** Current study was conducted on 50 infertile couples in the Department of Obstetrics and Gynaecology, M.L.B. Medical College, Jhansi over a period of 24 months. IUI was carried out in the remaining cycles served as control. **Result and Conclusion:** Out of 50, 36 females had primary infertility out of which 9 conceived giving rise conception rate of 18%. 14 females has secondary infertility, out of which 4 females conceived giving rise the conception rate of 8%. Total 13 females conceived giving rise to pregnancy rate per patient 26%.

KEYWORDS

Intrauterine insemination, Timing, Follicle rupture, Pregnancy rate

INTRODUCTION

IUI first described in 1939 refers to direct transfer of sperms to the intra uterine cavity. In the last few years IUI, a widely used technique for the treatment of infertility Rationale for IUI approach involves bypassing cervical barrier and depositing large number of washed motile spermatozoa directly into the uterus.

IUI may increase the number of sperms arriving at the fertilisation site in situations like Decreased sperm count Poor sperm motility Impenetrable or absent cervical mucus Antisperm antibodies.

AIMS AND OBJECTIVES

- Increase pregnancy rate of infertile couples following the IUI with washed sperms
- To diagnose the cause of infertility and identified factors which is related to our study like;-
- Male factor infertility
- Cervical factor infertility
- Unexplained infertility
- Mixed cause

Indications for IUI:

Unexplained infertility:

- CERVICAL FACTOR
- INSUFFICIENT PRODUCTION
- ALTERED QUALITY

Male factor:

- OLIGO
- ASTHENO
- TERATOZOOSPERMIA

Immunological factors:

- FEMALE- CERVICAL/HUMORAL
- MALE-SEMINAL/HUMORAL

Endometriosis

Ejaculatory failure:

- ANATOMICAL
- NEUROLOGICAL
- PSYCHOGENIC

MATERIAL AND METHODS

The present study was conducted on 50 infertile couples in the department of obstetrics and gynaecology, M.L.B. Medical College Jhansi over a period of 24 months After detailed history and examination of both male and female partners, treatment of the couples started with investigations of sperm parameters. IUI was

carried out in alternate cycles.

In the remaining cycles ovulation in the patient was induced with clomiphene citrate and HCG and patient was advised to have timed intercourse these cycles served as controls

RESULT

Table 1: Showing distribution of infertile cases who conceived with IUI with respect to AGE

AGE in years	CASES		CASES WHO CONCEIVED OUT OF TOTAL CASES	
	No	%	No	%
20-22	9	18	2	4
22-24	13	26	4	8
24-26	10	20	2	4
26-28	7	14	-	-
28-30	5	10	4	8
30-32	3	6	-	-
32-34	3	6	1	2
Total	50	100	13	26

The age ranged from 20 years to 34 years with mean age of 25.15 years with SD of 3.9 years

Out of the 13 females who conceived with IUI majority belonged to age group of 22-24 years and 28-30 years

Table 2: Showing the distribution of infertile cases who conceived with IUI with respect to PARITY

parity	cases		Cases who conceived out of total cases	
	No	%	No	%
Primary infertility	36	72	9	18
Secondary infertility	14	28	4	8
total	50	100	13	26

Out of 50 patients 36 patients were having primary infertility and 9 patients conceived whereas out of 14 patients of secondary infertility only 4 patients conceived

Table 3: Who conceived with IUI with respect to duration of infertility

Period of infertility (in years)	cases		Cases who conceived out of total case	
	No	%	No	%
2-4 years	23	46	3	6

4-6 years	11	22	5	10
6-8 years	11	22	4	8
8-10 years	5	10	1	2
Total	50	100	13	26

Table 4: Showing distribution of infertile cases who conceived with IUI with respect to factor causing infertility

Infertility factor	cases		Cases who conceived out of total cases	
	No	%	No	%
Female factor (poor PCT)	16	32	6	12
Male factor (poor seminogram)	10	20	3	6
mixed	7	14	1	2
unexplained	17	34	3	6
total	50	100	13	26

In 13 cases where conception occurs following IUI 6 couples were having female factor infertility, 3 couples had infertility because of male factor, 3 couples were having unexplained infertility and 1 belong to mixed group.

Table 5: Pregnancy rate per treatment cycle

No of cycle	No of patients starting cycle	No of pregnancies	Pregnancy rate per cycle
1	50	-	-
2	42	5	11.9
3	25	8	32

In the present study 117 IUI cycles were performed in 50 patients in 13 cases where conception occurred, 5 conceived in 2nd cycle and 8 conceived in 3rd cycle in present study however no patients conceived in control group

Table 6: Showing the distribution of patients who had proliferative & secretory endometrium respectively on first day endometrial biopsy report and who conceived with IUI subsequent to ovulation induction

Endometrial phase	cases		Cases who conceived out of total cases	
	No	%	No	%
Proliferative	23	46	7	14
Secretory	27	54	6	12
Total	50	100	13	26

Out of total 50 patients 23 had anovulation and 27 had ovular cycles out of which 7 patients conceived in anovular group giving a conception rate of 14% and 6 patients conceived in ovular group giving a conception rate of 12%

Table 7: showing the comparison between prewash and post wash sperm specimen of 50 patients with regard to count of sperm

Semen specimen	Count (million/ml) Mean +/- SD	T - VALUE	P - VALUE
Pre wash	67.4 +/- 37.9	11.04	P<0.0001
Post wash	84.87 +/- 33.9		

Table 8: Showing the comparison between pre wash and post wash sperm specimen of 50 patients with regard to motility of sperm

SEMEN SPECIMEN	MOTILITY % MEAN +/- SD	T - VALUE	P - VALUE
PREWASH	60.15 +/- 15.03	9.07	P < 0.0001
POSTWASH	68.62 +/- 14.14		

The above table depicted extremely higher significance between the mean morphology of pre wash and post wash specimen

Table 9: Showing the comparison between pre wash and post wash sperm specimen of 50 patients with regard to morphology of sperm

SEMEN SPECIMEN	NORMAL MORPHOLOGY MEAN +/- SD	T - VALUE	P - VALUE
PREWASH	60.12 +/- 14.46	11.65	P < 0.0001
POSTWASH	70.12 +/- 13.34		

The above table depicted extremely higher significance between the

mean morphology of pre wash and post wash specimen

Table 10: Showing the distribution of outcome of the conception who conceived with IUI

ABORTED OR DELIVERED CASES	OUTCOME OF THE CONCEPTION	
	NO	%
ABORTED	4	30.7
TWIN DELIVERY	2	15.4
NORMAL DELIVERY	7	53.9
TOTAL	13	100

Out of 13 conceptions, 4 conceived patients had spontaneous abortion, 2 couples had twin pregnancy while 7 couples had passed through full term normal delivery.

Table 11: Over all result of our study

Average age of the patients	25.15 years
Average duration of infertility	4.95 years
Primary infertility	36
Secondary infertility	14
Total no of cycle of treatment	117
Total pregnancy	13
Pregnant/patient	26%
Pregnancy/y	11.1%

DISCUSSION AND CONCLUSION

The age of female partner ranged between 20 to 34 years, the 13 females who conceived with IUI max were between age 22 to 24 years and 28 to 30 year age group

There was a statistically significant improvement in motility, count and morphology of sperms in the post wash specimen as compared to pre wash specimen

There were 16 couples with infertility due to female factor alone. These females have poor PCT. out of these conception occurred in 6 females with IUI giving rise to pregnancy rate 12%

17 couples who had unexplained infertility, conception occurred in 3 females giving rise to pregnancy rate 5%

10 couples with male factor infertility, conception occurred in 3 females with IUI giving rise to conception rate 6%

7 couples with mixed factor infertility conception occurred in 1 female giving rise to pregnancy rate of 2%

Total out of 50 females, 13 females conceived giving rise to pregnancy rate per patient 26%.

Out of 50 females, 13 females conceived, 4 females had aborted spontaneously, 2 females had twin pregnancy and 7 females had given birth to full term normal baby

In the present study there was no major complications like ectopic gestation, hyperstimulation syndrome or pelvic infection

Out of 50, 36 females had primary infertility out of which 9 conceived giving rise conception rate of 18%, 14 females had secondary infertility, out of which 4 females conceived giving rise the conception rate of 8%

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