



ORIGINAL RESEARCH PAPER

Gynaecology

RETROSPECTIVE STUDY OF THE OUTCOME OF IUI IN MALE FACTOR INFERTILITY

KEY WORDS: IUI - Intra Uterine Insemination, IUI (H) - Intra Uterine Insemination (Husband), HMG - Human Menopausal Gonadotrophin HCG - Human Chorionic Gonadotrophin, CC - Clomiphene Citrate

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ABSTRACT

Infertility is most commonly defined as the absence of pregnancy after one year of unprotected intercourse. About 90 percentage of couples will conceive within that time. The causes of infertility include Male factor contributing to 25-40 percentage, female factor 40-55 percentage and unexplained infertility. A retrospective study of the outcome of IUI in Male Factor infertility.

Materials and Methods

There were 100 infertile women with male factor infertility recruited for the study. 100 patient underwent IUI (H) in infertility clinic, Pariyaram Medical College. Favourable factor for treatment success. were age less than 40years, duration of infertility <6 years. Multi follicular response results has better treatment outcome than mono follicular response. As most of the pregnancies are achieved within 1-4 treatment cycles, not more than 4 cycles should be performed.

Introduction:

Infertility and subfertility are estimated to affect approximately one in seven couples worldwide. A significant proportion of infertile males are affected either by oligozoospermia (reduced sperm production) or Azoospermia (lack of any sperm in the ejaculate). According to WHO Laboratory manual 1999 certain diagnostic terminologies are used in semen analysis.

Semen Volume:

- Aspermia -No semen of fluid is emitted.
- Hypospermia -Less than 0.5 millilitre semen
- Hyperspermia -More than 6.0 millilitre semen

Sperm concentration:

- Azoospermia -No spermatozoa in the fluid
- Oligozoospermia -Less than 10million spermatozoa/ milliliter
- Polyzoospermia -More than 250million spermatozoa/ milliliter

Sperm quality:

Normozoospermia - Between 20 to 250million spermatozoa/ milliliter with more than 80 percentage sperm motility and normal sperm morphology.

Sperm motility:

- Asthenozoospermia -Less than 40 percentage motility.
- Necrozoospermia-Absence of sperm motility sperm morphology
- Teratozoospermia-Morphologic abnormalities involving the head, neck or tail

Intrauterine Insemination:

It is the first line in assisted conception treatment method as well as one of the least invasive technology.

Materials and Methods

A retrospective study of the outcome of IUI in male factor infertility was conducted in Pariyaram Medical College over a period of one year from December 1 2013 to December 1 2014.

Inclusion criteria:

1. Male partners diagnosed to have oligospermia (sperm count less than million, 5-10 million and 20 million) oligoasthenospermia based on semen analysis.
2. Couples with male sexual dysfunction.
3. Female partners with normal hysterolaparoscopy study.
4. Regular ovulation as on determined by serial USG.

Exclusion criteria:

1. Female partner with fibroids, endometriosis, adenomyosis.
2. Tubal pathology
3. Anovulatory cycles.

Couples with primary or secondary infertility reporting to Pariyaram Medical College diagnosed to have male factor

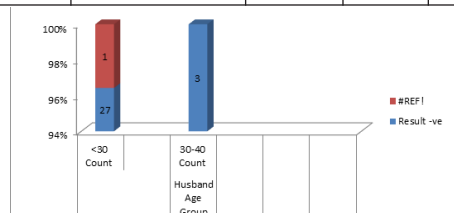
infertility will be included in the study. Informed written consent will be taken from the couple. Detail semen analysis of the male partner will be done at Pariyaram Medical College as per WHO standards. Semen preparation will be done by double density gradient method. All cycles were carried out between 1 Dec 2013 to 1 Dec 2014 at the infertility clinic of Pariyaram Medical College. The study couples had at least one year of infertility and had undergone a basic infertility evaluation. Intrauterine insemination was performed using an intrauterine catheter (C Karmer Delafontaine-prodimed Neuilly-eu-thelle France) with a 1 or 2ml syringe. The catheter was gently passed through the cervical canal and the sperm suspension expelled into the uterine cavity. Insemination volume of 0.5ml was inseminated. The women remained supine for 10-15 minutes after IUI. luteal support was given. Urine pregnancy was performed on day 19 of IUI.

Observation and Results:

1. Age

The result of decline in pregnancy rate with increased patients age.

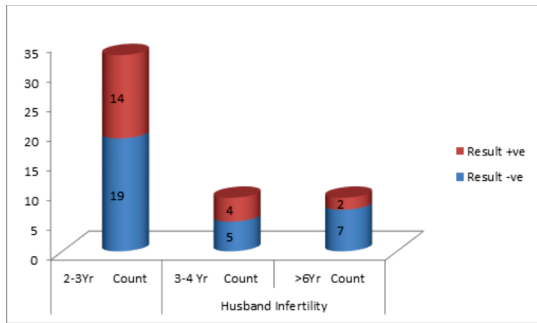
Group	Result		Total	
	-ve	+ve		
Age Group	<30 Count %	27 60.0	18 40.0	45 100.0
	30-40 Count %	3 75.0	1 25.0	4 100.0
	>40 Count %	0 0	1 100.0	1 100.0
Total	Count %	30 60.0	20 40.0	50 100.0



2. Infertility duration

We found that as duration of married life increases, the fertility rate decreases.

Group	Result		Total	
	-ve	+ve		
Infertility	2-3Yr Count %	19 57.6	14 42.4	33 100.0
	3-4 Yr Count %	5 50.0	4 50.00	8 100.0
	>6Yr Count %	7 77.8	2 22.2	9 100.0
Total	Count %	30 60.0	20 40.0	50 100.0



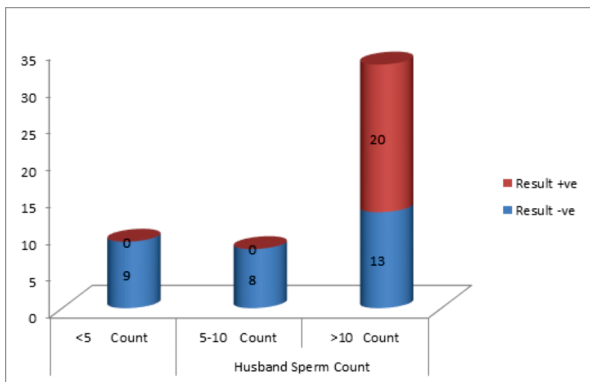
3. Sperm count

With a sperm count- less than 5 million/ml the success rate is 0 percentage.

With 5-10 percentage also, the success rate is 0.

Less than 10 million/ml with good motility had success rate around 3.2 percentage in our centre. Sperm count more than 10 million/ml, the success rate is 60.6 percentage.

Group	Result			Total
	-ve	+ve	Total	
Sperm Count	<5	9	0	9
	Count%	100.0	0.0	100.0
	5-10	8	0	8
	Count%	100.0	0.0	100.0
>10	13	20	33	
Count%	39.4	60.6	100.0	
Total	30	20	50	
Count%	60.0	40.0	100.0	



4. Number of follicles

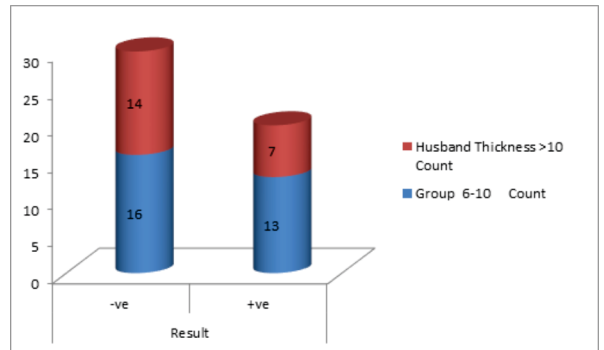
Multi follicular development may result in an increased number of fertilizable oocytes and a better quality endometrium in luteal phase thereby improving fertilization and implantation rates.

Group	Result			Total
	-ve	+ve	Total	
Number of follicles	.00	3	1	4
	Count %	75.0	25.0	100.0
	Count	9	4	13
	%	69.2	30.8	100.0
2.00	7	8	15	
Count%	46.7	53.3	100.0	
Count	8	6	14	
%	57.1	42.9	100.0	
4.00	3	0	3	
Count%	100.0	0.0	100.0	
Count	0	1	1	
%	0.0	100.0	100.0	
Total	30	40.0	50	
Count%	0.0	100.0	100.0	



5. Endometrial thickness

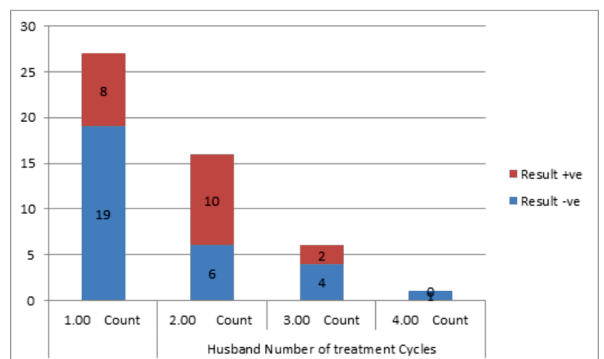
Group	Result			Total
	-ve	+ve	Total	
Endometrial Thickness	6-10	16	13	29
	Count %	55.2	44.8	100.0
	>10	14	7	21
Count %	66.7	33.3	100.0	
Total	30	20	50	
Count %	60.0	40.0	100.0	



6. Number of treatment cycles

Most of the pregnancy have achieved within 1-3 cycles

Group	Result			Total
	-ve	+ve	Total	
Number of treatment Cycles	1.00	19	8	27
	Count %	70.4	29.6	100.0
	2.00	6	10	16
	Count %	37.5	62.5	100.0
	3.00	4	2	1
Count %	66.7	33.3	100.0	
4.00	1	0	50	
Count %	100.0	0.0	100.0	
Total	30	20	19	
Count %	60.0	40.0	100.0	



Summary and conclusion

By evaluation the efficacy of male factor infertility A Retrospective study of 100 infertile women with Male factor infertility was conducted in Pariyaram Medical College. We came to a conclusion that favourable factors for treatment success are :

- age <40 years old (female)
- duration of infertility <6 years,
- Multifollicular response results has better treatment outcome than monofollicular response.
- As most of the pregnancies are achieved with 1-4 cycles, not more than 4 cycles should be performed in IUI.

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