

Associated Factors and Perinatal Outcome of Assisted Reproductive Technology

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Abstract: *Infertility is a major health problem that effects on couples quality of life. It is considered as one of the physical and social issue for women. Infertility have treated by the ART. With the help of ART the rate of infertility become reduce that sorrow can converted to hope. A retrospective and explorative study conducted in selected infertility women under the treatment of ART in selected hospital of Bhubaneswar, Odisha with total 70 infertility women using non probability convenient sampling technique by self structured questionnaire schedule. The data was collected and analyzed by inferential statistics. The study result revealed that 35% sample were of 31-35 yrs age group , 73% were female factors and 90% were single baby and maximum type of delivery 87% were caesarean section. Among the infertile women 35% were tubal blockage. As per the newborn condition 36% were preterm baby and apgar score 96% were immediately crying. It was found that there was no correlation between associated factors and perinatal outcome of assisted reproductive technology. The above study was permitting examination of underlying associated risks factors with these birth and providing a more unique impact of assisted reproductive technology on perinatal outcomes.*

Keywords: Associated factors, perinatal outcome, Assisted reproductive technology

1. Introduction

Those couples who are want to become parent being unable to conceive a child. Having a inside pain in reality. Many of the couple are wasting their portion of lives by the attempting to avoid the unplanned pregnancies and wait for the proper time to conceive the child. Now a day in Indian society the women are often identified with the ability to give birth in which the both men and women have to pass on their genetic and generational legancies.⁹ After the use of Assisted reproductive technology growth has raised in the range of perinatal outcomes which result in preterm birth, low birth weight, and neonatal death. This study is permitting examination of underlying associated risks factors with these birth and providing a more unique impact of assisted reproductive technology on perinatal outcomes.¹¹

Problem statement

Assess the associated factors and perinatal outcome of assisted reproductive technology (ART) in selected hospital, Bhubaneswar.

Objectives

- 1) Assess the associated factor of assisted reproductive technology [ART].
- 2) To determine the perinatal outcome of assisted reproductive technology [ART].
- 3) To find out the co-relation of associated factors with perinatal outcome of assisted reproductive technology.

2. Material and Method

Both Retrospective and explorative study was conducted in selected infertility women under the treatment of ART in CHR & MRD dept of IMS & SUM hospital, Bhubaneswar, Odisha from February 2018 to July 2018. A total 70 infertility women using non probability convenient sampling technique were taken. The records reviewed were stored as

electronic health records. Data was collected by self structured questionnaire schedule and both descriptive as well as inferential statistics was used for data analysis. The profile of the women with IVF was evaluated with respect to age of patient, type of infertility, presence of associated factors for infertility, indication for the procedure, any maternal complication found during perinatal period and number of baby born ,type of delivery conducted, condition of newborn after birth ect.

3. Result and Discussion

Distribution of study subjects according to the socio-demographic variables in frequency and percentage.

Among the 70 samples very few were 20-25 yrs and 41-45year 34% were 26-30 yrs, 37% were 31-35 yrs. Primary infertility were 59% and 41% were secondary infertility. Presence of female factor were 73% and 90% were delivered single baby and majority 87% were having caesarean delivery.

Distribution of study subjects according to the associated factors. The data presented in the fig-1 and 2 showing the rate of female infertility due to very few 19% samples were uterine factors, tubal factors were 35% and ovarine were 37% and majority were responsible for others factors. Among the clinical indications, male factor infertility only pretesticular was found to be 27% where as testicular and post testicular were not found.

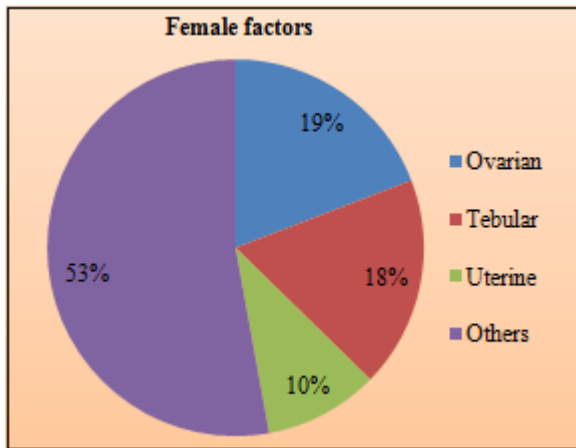


Figure 1: Pie digram showing percentage distribution of female factors

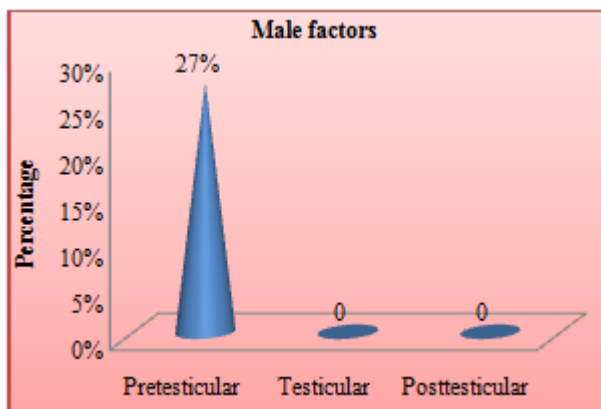


Figure 2: Column graph showing percentage distribution of male factors

Distribution of study subjects according to the perinatal outcomes

In maternal outcome of IVF it was found that eclampsia were seen in 4%, pregnancy induce hypertension were 34%, vaginal bleeding were only 1%, normal delivery were done in 13% where as 87% were undergone caesarean section.

As regards to newborn outcome Jaundice in baby found 24%, Sepsis in baby were very few 1%, Preterm baby were 36%, Newborn shifted ward directly from labour room after delivery were 61%, Newborn shifted immediately to NICU just after delivery were 24% and 11% Newborn were shifted from ward to NICU.

With respect to the complication towards mother having IVF Cardiac arrest, shock, respiratory distress, premature rupture of membrane, prolong labour, malpresentation and Postpartum haemorrhage, were not found outcome of IVF in the above study findings. Similarly in newborn outcome Congenital abnormalities, Hypoglycaemia, Still birth, Fetal death were also absent

Finding the relationship between associated factors and perinatal outcome of ART

Table 1: Mean, r value, df, p value of associated female factors with perinatal outcome of ART.

N=70

Parameters	Mean	r value	df	P value	Inference
Associated female factors	34.08	0.03	69	0.78	NS
Perinatal outcome	60.88				

Data presented in table –1 shows that the mean score of perinata outcome 60.88 was more than mean score of associated female factor 34.08 with “r” value = 0.03 at df =69 and p = 0.78 which was not statistically significant. It infers that there was no relationship between Associated female factors and Perinatal outcome.

Table 2: Mean, r value, df, p value of associated male factors with perinatal outcome of ART.

N=70

Parameters	Mean	r value	df	P value	Inference
Associated male factors	11.74	0.02	69	0.81	NS
Perinatal outcome	60.88				

Data presented in table – 2 shows that the mean score of perinatal outcome 60.88 was more than mean score of associated male factor 11.74 with “r” value =0.02 at df=69 with p value 0.81 which was not statistically significant.

4. Discussion

Data in the present study concludes that majority of infertile women belongs to age group of 26-30 yrs were 34% and 31-35-yrs were 37% and majority of women were Hindu 97%. majority of subjects 77% were housewife women .The maximum 59% were having primary type of infertility and 41% were having secondary type of infertility . the present study reveals that majority of subject73% were female factor and minority of male factor 17% and very few 10% are both factor present also majority of subject 90% are single baby and very few 10% were twins baby. Maximum type of delivery 87% are caesarean suction and minimum 13% are normal delivery.

It was supported by Nafeesa N. Dhalwani, Shereel Boulet et. al infertile mothers in the ART group were older compere to the non ART group of mother p<0.001. 30-34 age groups mothers were 32.9% more common and also 35-39 age group mothers were 37.1%. caesarean delivery 46.6% are more common in ART groups.⁵

The present study found that majority of infertile women were tubal blockage 35% present and also thyroid gland problem 30% present. Also majority of subject 29% were having more stress and maximum of female factors 26% were having ovulation disorder. Majority of male factors 11% were poor sperm health. The similar study was supported by Nafeesa N.et all the that female factors are more common than male factors. Female factors infertility in 63.8% of cases and male factors in 38.3% of cases and unexplain infertility were 13.7% present. The most common reason for ART treatment for female infertility was tubal factors. In the study 13.5% were present ovulation disorder/

PCOD and majority of subject 19.0% tubal factors and very few 3.6% uterine factors.^{5,6}

The above study the newborn outcome found as that 36% were preterm baby born and 24% were seen newborn jaundice after IVF. It was supported by Committee opinion no- 671 that outcome of ART groups were increase risk of preterm birth 95% than the normally occurring birth. Still birth is very fewer in IVF pregnancy.⁶

5. Limitation

Data were collected from last 6 month records which available from medical record department, Centre for reproductive health Department only. The time period of the study is limited. The study limited to only one private hospital. Sample selected were having ART treatment taken and also delivered in IMS & SUM hospital.

6. Recommendations

The study can be replicated on large samples with different demographic characters. A descriptive study can be undertaken to find out knowledge of patient regarding factors affecting the perinatal outcome of ART. Self instruction modules regarding factors affecting perinatal outcome of ART among infertile women can be given to others infertile couple. Effectiveness of health teaching and knowledge of infertile women towards various technique of ART can be collected. A qualitative study can be conducted to find out the quality of life and experience of women undergone ART and its outcome.

7. Ethical Consideration

This study was approved by The Institutional Review Board and research committee of college and also prior permission was taken from medical superintendent, HOD of Centre for reproductive health Department, and Medical record Department of IMS & SUM hospital, Bhubaneswar. This was a retrospective study. The information was used only for the purpose of the study.

8. Conclusion

In recent years, lifestyle changes have led to a significant increase in demand for IVF techniques, and more recently this increase has been more significant in IVF. As per the study Assisted reproductive technology growth has raised in the range of perinatal outcomes which result in the birth, including the excess of preterm birth, low birth weight, small for gestational age and neonatal death. The profile of women with IVF pregnancy more number of infertile women. It was observed that there was no significant relation among associated factors and perinatal outcomes to each other.

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