Summary

7. SUMMARY

1. Majority of the patients were in the age group between 26-35 yrs and the mean age was 31.3±5.0 yrs.
2. In majority (78.91%) of patients the duration of infertility was less than 10 years.
3. Majority of patients had primary infertility.
4. The major indication was female factor.
5. Majority of women had agonist protocol.
6. 46.15% of the patients required r FSH dose in the range of 2501-3500 IU and a mean dose of 3120.3±924.2.
7. 47.60% of the patients required both r FSH and HMG dose in the range of 2501-3500 IU and a mean dose of 3257.7±996.2.
8. Majority of them required 10-12 days of stimulation with a mean of 11.2±1.9.
9. 88.09% of women had r hCG trigger.
10. Among 403 patients, the total number of oocytes retrieved were 5840, with mean no. of oocytes retrieved being 15±8. Of them 4662 (79.83%) were M II. Of these oocytes 58.13% were good quality oocytes.
11. The mean number of oocytes injected was 11±7 and the oocytes fertilized was 9±6. Fertilization was achieved in 80% of the oocytes injected. EC embryos were observed in 40.94%, LC embryos were 32.01% and *combined cleavage were 27.05. Majority (66.18%) were grade I embryos. *As it is difficult to
Early cleavage of human embryos to the two-cell stage: A simple, effective indicator of implantation and pregnancy in intra cytoplasmic sperm injection.

separate and keep EC and LC embryos, it is decided to exclude this group from the analysis.

12. Logistic regression analysis was performed for early cleavage status and the female age. There were statistically no significant influence of age on early cleavage status (p=0.940) (figure-29).

13. The Pregnancy rate was 57.82%, of them 48.07% had fresh embryo transfer and 51.93% had frozen embryo transfer. Clinical pregnancy rate for both fresh and frozen embryo transfer was 55.83%.

14. There was no significant difference in age (p=0.116), duration of infertility (p=0.222), type of infertility (p=0.934) in both the groups.

15. However, if the study subjects are divided in to two groups with 35 years as cut off, we observed statistically significant difference in the age distribution among these two groups, (p<0.05) with early cleavage rate of 60.68% in patients ≤35 yrs and 38.33% in patients >35yrs.

16. There was no significant difference in the stimulation protocol (p=0.454), in both the groups.

17. Even though there was no statistically significant difference in the requirement of rFSH (p=0.716) between the groups, 72.11 % of group I required rFSH in the range of 1500-3500 IU whereas 69.77% of group II required rFSH in the range of 2501-4500 IU. So EC embryos are more when the dose of gonadotropins are less even though it is not statistically significant.

18. There was no significant difference in the dose of both rFSH and HMG required in both the groups (p=0.308). Even though there was no statistically significant difference in the requirement of both rFSH and HMG between the
Early cleavage of human embryos to the two-cell stage: A simple, effective indicator of implantation and pregnancy in intracytoplasmic sperm injection.

groups, 75.24% of group I required both rFSH and HMG in the range of 2501-4500 IU whereas 69.57% of group II required both rFSH and HMG in the range of 2501-4500 IU. Only 4.96% required >4500IU of rFSH and HMG in group I whereas 11.95% in group II even though statistically not significant.

19. In the agonist group, there was a positive correlation r=0.039 which was not statistically significant between female age and early cleavage status (p=0.701) (figure-30).

20. In the antagonist group, there was a negative correlation r= - 0.100 which was not statistically significant between female age and early cleavage status (p=0.419) (figure-31).

21. There was no significant difference in the number of days of stimulation between the two groups (p=0.124).

22. There was no significant difference in the ovulation trigger of r h CG (p=0.133), u h CG (p=0.195) and Luprolide acetate (p=0.444) between the two groups. So drug used for ovulation trigger did not influence the cleavage of embryos.

23. The number of MII oocytes, good quality oocytes, oocytes fertilised and good quality embryos were significantly more with early cleavage group followed by late cleavage group (p<0.05). So good quality oocytes and embryos significantly influence the cleavage of embryos with more early cleavage embryos.

24. 83.05% of good quality oocytes in early cleavage group, 16.95% in late cleavage groups. 76.25% of good quality embryos in early cleavage group and 23.75% in late cleavage group which was statistically significant.
Summary

25. So study population with early cleavage embryos had significantly better pregnancy rate, implantation rate and clinical pregnancy rate. (p<0.05). We analysed the live birth data in both early and late cleavage group. 29 patients in group I and 16 patients in group II were lost for follow up. For the rest we have calculated the live birth data which was statistically significant.