

EMBRYOGLUE AS A TRANSFER MEDIA IN FET CYCLES: A BOON OR BANE ?

Dr. Surya Malik, Dr. Sandeep Karunakaran, Dr. Sankalp Singh, Dr. Mohd.Ashraf, Dr. Noushin Ashraf, Dr. Alex Varghese

INTRODUCTION: Assisted reproductive technologies have become an integral part of infertility treatment in the present decade. ART outcomes have improved since the birth of the world’s first IVF baby (Louis Brown) was reported in 1978 & an estimated 8 million babies have now been born from the application of various ART procedures¹.To increase the efficacy of *in-vitro* fertilization/embryo transfer (IVF-ET) cycles improvements have been made in techniques of ovarian stimulation, fertilization, culture and transfer of embryos. Implantation is of prime importance for pregnancy establishment and subsequent embryonic development. Successful implantation involves the fully-achieved pluripotency of blastocysts and well-controlled reciprocal interaction between embryo and receptive uterus² .

MATERIAL & METHODS:This is a retrospective study done between the time frame of July 2017 to December 2017, for a period of 6 months. Total 538 patients underwent frozen embryo transfer during this interval.

- Inclusion criteria:
- 1.Female age < 40 years
 - 2.At least one good quality embryo for transfer(Day 3 /Day 5)
- Exclusion criteria:
- 1.Poor ovarian reserve (BOLOGNA CONSENSUS)³
 - 2.Men with Non -obstructive Azoospermia(NOA)
 - 3.Fresh Transfers
 - 4.Difficult embryo transfers
 - 5.Sequential Transfers
 - 6.Uterine anomalies (congenital or acquired)
 - 7.PGT (Preimplantation genetic test) cycles

After applying the inclusion &exclusion criteria , patients were divided into two subgroups, study group including 210 patients, versus control group of 233 patients. For the study group the ET media was EmbryoGlue®(Vitrolife, Sweden), containing recombinant human albumin & a high concentration of HA (0.5 mg/ml).For the control group the ET media was Life Global, Protein - supplemented (HSA 4.4 mg/dl).Culture Media Exposure time was kept to a constant of 30 minutes. Primary outcomes include: Livebirth Event
Intermediate outcomes include: Clinical Pregnancy Rate (CPR): Implantation Rate, Miscarriage Rate, Biochemical Pregnancy& Multiple Pregnancy.
Data Analysis: Statistical analysis was performed using Independent sample t test & Chi- square test using software SPSS (Statistical Package for the Social Sciences). Version 20.. Statistical significance was set at $P < 0.05$.

RESULTS: A total of 443 cycles were analysed in this time frame. Baseline patients characteristics including clinical profile including age, AMH, no of attempts of ICSI & ET , stimulation details were similar in both groups (study versus control). Similarly the embryo parameters comprising the fertilisation rate, cleavage rate, no of embryos, quality of embryos were comparable in both groups(Table no 1&2) . LBR was significantly less in study group as compared to control group. (Figure . 1)

TABLE NO. 1

Variables	STUDY GROUP (N=210)	CONTROL (N=233)	P value
AGE	33.429±5.2193	33.258±3.0104	0.636
AMH	3.92857±3.450077	4.16792±2.945034	0.154
No of embryo	1.843±.4579	1.893±.3846	0.187
Endo thickness	10.0820±.88603	10.0974±.91529	0.856
ICSI ATTEMPT	2.000±1.3445	1.940±1.0930	0.548
DOSE OF Gn	1808.701±485.1756	1819.277±454.3393	0.989
ET ATTEMPT	2.262±1.4942	2.167±1.3366	0.702
E2 TRIGGER	2497.840±1142.9695	2764.583±1260.8276	0.073
OPTIMUM	10.561±5.0222	10.645±4.6297	0.596
ASPIRATED	12.921±5.9487	13.015±5.78	0.871
INJECTED	12.563±6.6397	12.365±5.8759	0.860
FERT Rate	77.64%	75.40%	0.668
CLEAVAGE Rate	98.85%	99.02	0.610

TABLE NO. 2

Variables		STUDY GROUP (N=210)	CONTROL (N=233)	P value
Infertility	PRIMARY	126(60%)	144(61.80%)	0.698
	SECONDARY	84(40%)	89(38.19%)	0.696
Good quality embryo		179 (85.23%)	198(84.97%)	0.938
Stimulation days		8.53±0.92	8.50±1.05	0.750
DAY	cleavage	120(57.14%)	149(63.94%)	0.143
	blastocyst	90(42.85%)	84(36.05%)	0.147



STUDY vs CONTROL

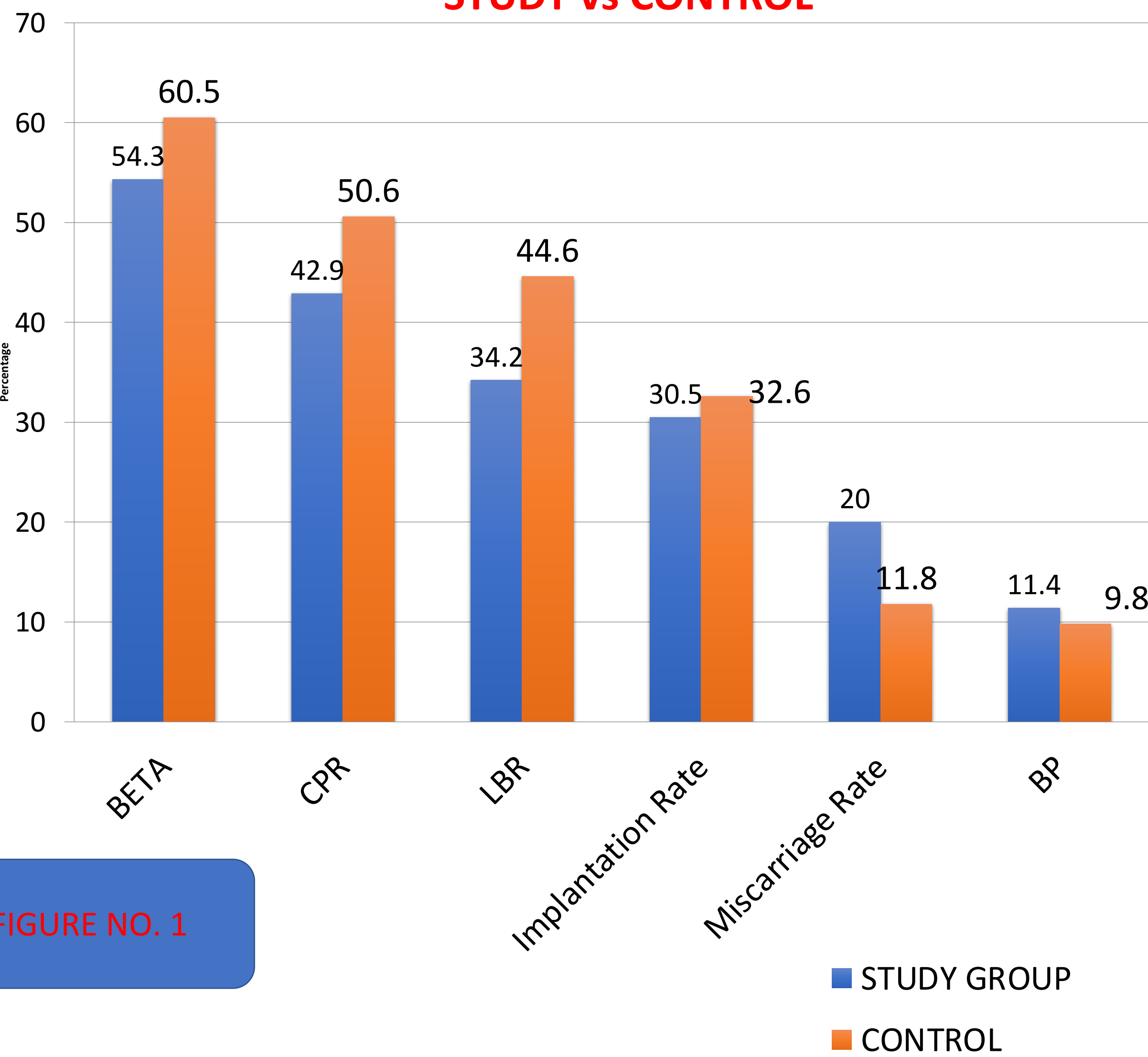


FIGURE NO. 1

CONCLUSION:Our study indicates that EmbryoGlue® should be used with caution in non selected population.

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THANKS