BLASTOCYST CONTRACTION AS A MARKER OF IMPLANTATION

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SUMMARY: Blastocyst Contractions it seems necessary to weaken and break the surrounding zona pellucida embryo (Hatching), allowing the exit thereof. This latter phenomenon is necessary for the establishment and embryo implantation in the endometrium.

We have defined weak contraction, when it separated trophoectoderm less than 50% of the zona pellucida and stronger contraction, when when it separated trophoectoderm over than 50% of the zona pellucida.

MATERIAL AND METHODS: We performed a retrospective study, between 09/09/2009 and 01/07/2012 IVI clinics in Murcia and Valencia. Were studied a total of 502 embryos with known implantation (pure transfer). They were divided into two groups, A) Embryos without any contraction or one or more weak contractions (438) and, B) Embryos with at least a strong contraction (64).

There was no bias treatment performed, age, etiology, etc.

RESULTS: Group A: 438 blastocysts transferred, who had not any contractions or one or more weak contractions, had an implantation rate of 48.17%

Group B: 64 blastocysts transferred who had at least one strong contraction, had an implantation rate of 31.25%

CONCLUSIONS AND DISCUSSION: From these results, and according to the literature, based on animal models, we can conclude that in embryos cultured in vitro, it is inferred that weak contractions plays some important roles in embryo implantation, whereas strong contractions have the effect inhibiting implantation. We must study the contraction pattern of the blastocyst, important for the achievement of hatching, this being essential for embryo implantation.