

INCIDENCE OF MONOZYGOTIC TWINNING IN IVI MADRID: A 4 YEARS EXPERIENCE.

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Introduction: The occurrence of monozygotic twinning (MZT) in the general population is 1/250 (0.42%). In artificial reproduction techniques (ART), embryo manipulation and blastocyst transfer (BT) have been linked to an increased incidence of MZT. This study aims to evaluate the rate of MZT in our clinic and assess the association to ART procedures.

Material and methods: In the 2006-2009 period, 4502 patients achieved clinical pregnancy after IVF in IVIMadrid. We assessed the incidence of MZT according to fertilization technique, BT, egg-donation and whether there were embryos cryopreserved. Perinatal outcome was also evaluated.

Results: The overall rate of MZT was 0,64% (29/4502). This was a clear reduction compared to the 2000-2001 rate in our clinic, 1.39% (8/573).

The rate of MZT in the ICSI group was 0,72% and after BT 0,94%. IVF cycles with more than 2 embryos cryopreserved had a 1,15% rate of MZT. However the incidence of MTZ in egg-donation was only 0,55%. Differences among groups were not statistically significant.

Only 59% of the 29 sets of MTZ reached livedelivery. This yielded 27 liveborn infants, 36,5% of those ended in preterm birth. Spontaneous reduction to singleton occurred in 20,7% of the cases.

Conclusions: Our analyses failed to show any particular characteristic of MZT conceptions in relation to ART.

Our study suggests that the risk of MZT is significantly lower in the more recent time period, likely due to the improvements in embryoculture. Finally MZT showed an increased risk of adverse perinatal outcome.