

# Morula stage embryos on day 5 – what to expect?

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## Introduction:

Extending embryo culture to blastocyst stage provides better opportunities for selection of embryos with higher developmental potential and decreases the number of transferred embryos. Thus the frequency of multiple gestations is lower. Replacement of blastocysts enhances the reproductive outcome of IVF. On the other hand, culturing the embryos to day 5 for transfer is related with number of risks: monozygotic twinning, no spare embryos for freezing, not achieving the blastocyst stage etc. The aim of this study was to evaluate the pregnancy outcome in patients with morula stage transfer on day 5. Also we assessed the predictive values of different parameters.

## Material and methods:

The current study includes 63 IVF/ICSI cycles with embryo transfer on day 5, separated into 2 groups:  
Group A – 30 patients with transfer of morula stage embryos on day 5  
Group B – 33 patients with transfer of blastocyst stage embryos on day 5  
In both groups we have analyzed: average number of retrieved oocytes, fertilization rate, embryo quality on day 3, embryo quality on day 4, blastocyst formation on day 5 and pregnancy rate.

## Conclusions:

Embryo transfer of morula stage embryos on day 5 is related to lower pregnancy rates. No difference in embryo quality was observed between two groups on day 3. Slow developing embryos on day 4 could be a predictive factor for high risk for absence of blastocyst stage on day 5.

## Results:

There was no statistical difference between the two groups in: average number of retrieved oocytes Group A (9.8) and Group B (12). Fertilization rates (82% Group A versus 83% Group B) and embryo quality on day 3 (Group A - 34% good, 22% average and 44% bad; Group B - 33% good, 28% - average and 39% bad embryos) were also similar in both groups ( $P > 0.05$ ). In contrast of these data, there was a significant difference in embryo development on day 4 in first group (16.5% compacted morula stage and 83.5% cleavage stage) versus the second one (58.5% compacted morulas and 41.5% cleavage stage). Blastocyst formation on day 5 in second group was 50% (29% morula and 21% cleavage stage embryos respectively). No blastocysts observed in group A. Pregnancy rate in Group B was higher comparing to Group A (42.4% versus 20.0%) ( $P \leq 0.05$ ).

