

# Speculum retention during embryo transfer does not improve pregnancy rates following embryo transfer - a randomized study

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## Summary

**Purpose:** To corroborate or refute two previous studies that suggested that a technique using prolonged speculum retention may improve pregnancy rates per embryo transfer. **Methods:** Women undergoing day 3 embryo transfer were randomly assigned to the conventional transfer technique vs the speculum retention technique. The speculum retention technique involves following the embryo transfer not to withdraw the speculum but to loosen the screw in order to exert gentle pressure on the portiovaginalis of the cervix and leave it in for seven minutes. **Results:** Clinical and viable pregnancy rates following the standard technique were 48.9% and 44.4%, respectively, vs 43.8% and 37.5% with the speculum retention technique. The implantation rates were also similar - 37.6% vs 37.5%. **Conclusions:** This study was unable to corroborate the benefit of speculum retention in order to improve pregnancy rates per transfer.

**Key words:** Speculum retention; Embryo expulsion; Embryo transfer.

## Introduction

A previous study found a higher pregnancy rate by using a speculum retention technique on the day of embryo transfer to minimize embryo expulsion [1]. A study was presented at the 2008 Pacific Coast Reproductive Society meeting seemingly corroborating the aforementioned study [2]. One physician who had the lowest pregnancy rates per embryo transfer among the three rotating physicians performing weekly embryo transfers randomly performed the embryo transfers with or without the speculum retention and found a clinical pregnancy rate per fresh embryo transfer of 55.7% and per frozen embryo transfer of 41.7% vs 38.1% and 23.8%, respectively, without speculum retention [2].

In view of the marked improvement another physician in the group who had one of the better statistics among the physicians evaluated the speculum retention technique in a randomized manner and these data are now presented.

## Materials and Methods

The first four days of the week (Sunday to Wednesday) embryos were transferred using a standard technique and Thursday to Saturday the speculum retention technique during the first rotation with this technique). These were reversed during the second trial week and so on.

In the speculum retention technique following the embryo transfer the screw of the vaginal speculum was loosened in order to exert a gentle pressure on the portiovaginalis of the cervix. The speculum was maintained for seven minutes.

## Results

The clinical pregnancy rate per transfer (viable fetus at 8 weeks) was 48.9% (22/45) with the standard technique and 43.8% (14/32) with the speculum retention.

The viable pregnancy rate past first trimester did not show any benefit to speculum retention either - standard technique - 44.4% (20/45) vs speculum technique - 37.5% (12/32). The implantation rates were almost identical: standard technique - 37.6% vs speculum technique - 37.5%. All comparisons showed  $p > .05$ , chi-square analysis.

There did not appear to be any confounding variables in that the ages were similar (36.3 for standard and 35.8 for speculum retention and the day 3 serum FSH (mIU/ml) was similar (9.79 standard vs 7.21 speculum retention).

## Discussion

A second physician from the same group that corroborated the improved pregnancy rates by the retention speculum technique, which theoretically could help to prevent expulsion of the embryos, could not substantiate any benefit [1, 2].

Interestingly the improved clinical pregnancy rates with the physician who did the previous study in our group using the speculum retention technique decreased again. Further investigation found that the problem may have been related to insertion of the embryo transfer catheter sheath past the internal cervical os. Physician pregnancy rates are now up to par with the rest of the group that did not retain the speculum.

Revised manuscript accepted for publication November 4, 2010

## References

- [1] Mansour R.: "Minimizing embryo expulsion after embryo transfer: a randomized controlled study". *Hum. Reprod.*, 2005, 20, 170.
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