

## عنوان مقاله:

Serum Anti-Mullerian hormone and embryo morphokinetics detecting by time-lapse imaging: A comparison between the polycystic ovarian syndrome and tubal factor infertility

## محل انتشار:

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## خلاصه مقاله:

Background: Anti-Mullerian hormone (AMH) is considered as a good marker for quantitative evaluation of ovarian response to the stimulation during assisted reproductive technology cycles. Objective: To evaluate the association between serum AMH level and embryo morphokinetics using time-lapse imaging and intracytoplasmic sperm injection (ICSI) outcomes in women with polycystic ovarian syndrome (PCOS). Materials and Methods: We evaluated a total of 547 embryos from 100 women underwent ICSI cycles; 50 women with PCOS and 50 women with tubal factor infertility. Serum AMH level was measured in all participants. Time-lapse records were annotated for time to pronuclear fading (tPNf), time to 2-8 cells (t2-t8), reverse cleavage, direct cleavage, and also for the presence of multinucleation. Results: AMH was negatively correlated with t5, t8, and the third cell cycle ( $p=0.02$ ,  $p=0.02$ , and  $p=0.01$ ; respectively) in PCOS group. AMH had no correlation with embryo kinetics in infertile women with tubal factor infertility. Moreover, AMH level is similar between embryos with and without direct cleavage as well as reverse cleavage and Multinucleation in both groups. The Receiver operating characteristic curves analyses indicated that AMH was not an accurate predictor of clinical pregnancy as well as a live birth (AUC=0.59 [95% CI, 0.42-0.76]) in PCOS women. However, in the women with tubal factor infertility AMH showed a fair prediction value for clinical pregnancy (AUC=0.64 [95% CI, 0.48-0.82]) along with the live birth (AUC=0.70 [95% CI, 0.55-0.85]). Conclusion: Some of the time-lapse embryo parameters may be related to the AMH concentration. However, AMH is not an accurate tool to predict the ICSI outcomes in PCOS women.

## کلمات کلیدی:

Anti-Mullerian hormone, Embryo morphokinetic, Pregnancy outcome, Time-lapse, PCOS

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