

عنوان مقاله:

The effects of dimethyl sulfoxide and ethylene glycol as vitrification protectants on different cleavage stages of mouse embryo quality

محل انتشار:

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خلاصه مقاله:

The effect of modified vitrification was assessed on cellular development capability in mouse embryos cultured in vitro. In this study, ۴۶۶ embryos (from zygote to morula stages) were vitrified then thawed embryos have been incubated for in vitro farther development up to blastocyst stage. Also, vitrification and thawing procedures were the same for all experimental groups. Mouse different embryonic cleavage stages were vitrified in ethylene glycol (EG) plus dimethyl sulfoxide (DMSO) and sucrose (VS-۱) and EG plus DMSO (VS-۲) and thawed by directly placing the vitrified drop into sucrose solution (TS) at ۳۷ °C. High recovery (۷۲-۹۷%) of morphologically normal embryos was evident following vitrification and thawing. Development of the vitrified morulae into blastocysts (۹۲%) was higher ($p < ۰.۰۵$). The amount of zygote and ۲-cell stages that achieved to blastocyst stage was very low. With progressing the embryo cleavage to morula stage, the embryos that reached to blastocyst were increased to its maximum number. We concluded that the modified vitrification procedure supported better survival of morula stage compared to other cleavage stages in mouse embryos.

کلمات کلیدی:

Vitrification, Blastocyst, Morula, ethylene glycol, Dimethyl sulfoxide

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