Rescue in-vitro maturation (rIVM) outcome: The single center experience

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ABSTRACT

Introduction: In-vitro Maturation (IVM) is not new but its implementation and high specialization are needed to be improved for consistent and optimum outcomes. Rescue IVM (rIVM) is preferred as an adjunct for standard IVF to cater the desynchronized follicle development as well as in women with diminished ovarian reserve. However, it's not popular due to its potential interference by triggering agents on oocyte maturation. New evidence is needed for appropriate rIVM utilization. **Objective:** This study aimed to delineate the demographic profile of rIVM women and its outcome following rIVM-IVF regarding the type of fertility and its correlation with oocyte maturation and quality. **Materials and Methods:** A three-year retrospective data of 215 women who underwent rIVM-IVF in the Advanced Reproductive Centre of Hospital Canselor Tuanku Mukhriz from January 2021 to December 2023 were traced and included. Demographic data and IVM outcomes were recorded and analyzed. The association of patient factors and variables to oocyte maturation rate was calculated. **Result:** About 261 out of 628 mature oocytes were yielded via rIVM, thus the oocytes maturation rates (OMR) were 41.6%. Following that, 89 oocytes were successfully fertilized (2PN) – fertilization rate 34%. Surprisingly, only the hCG trigger was found to have better OMR compared to dual trigger or Decapeptyl agent (p-value 0.027, OR 2.021, CI 1.085-3.766). Otherwise, no significant association between patient factors with OMR. **Conclusion:** The OMR was similar in our center was comparable to the current global data. Otherwise, hCG was found to be a good trigger agent in improving the OMR in rIVM.