

In Vitro Maturation of Oocytes

In vitro maturation of oocytes, as the name suggests is the process of harvesting oocytes from a patient with minimal ovarian stimulation and prior to its natural release from the ovarian follicle. The oocytes thus obtained are normally found in any one of the developing stages such as prophase-I, otherwise known as Germinal vesicle and the Metaphase-I. They are further matured in vitro using specially formulated culture media and checked for further development every 18-24 hours. Ideally the time taken to mature is close to 48 hours in most cases. Following assessment and successful transition to ideal maturity, that is, metaphase-II, the oocyte is injected with the husband's sperms using the ICSI technique. Conventional insemination can also be performed but we had better success with fertilization following ICSI. We have compiled data to show that we tried with minimal ovarian stimulation as well as in conventional cycles, harvested immature oocytes, which did attain maturity and progressed to form embryos; however we had one successful twin pregnancy which is ongoing.



What are the advantages of IVM that we are considering?

The technique was devised to bring down incidence of ovarian hyperstimulation syndrome-a side effect of the use of hormone injections for stimulation, as well as, to cut down costs of the conventional cycle by using minimal ovarian stimulation. Yes, although it sounds like a lucrative offer-the success rates in most studies are lower than the conventional IVF. However it does seem promising in cases of polycystic ovarian disease, where not only do they hyper respond to stimulation, but also yield a larger proportion of immature oocytes.