Obstruction of liquor vein in a child from a twin pregnancy following oocytes vitrification

Context: Oocyte freezing is becoming a standard component of ART programs. The number of reported live births resulting from oocyte cryopreservation has been rapidly increased over the past decade. As developments in the area of oocyte freezing are fairly recent, there is a limited knowledge regarding the safety of this technology.

Objective: In the present study we report a case of minor CNS defect observed in one fetus from a twin pregnancy obtained after oocytes vitrification (closed system).

Methods: In 2013 the patient underwent to controlled ovarian stimulation using a GnRH antagonist protocol. Ovum pick-up yielded 18 oocytes. Since the fresh cycle did not yield pregnancy, embryo transfer (ET) of two thawed oocytes was performed few months later.

Patients: The couple approached our ART center in 2010 after 8 years infertility due to male factor. The female partner aged 34, the male partner aged 36, and all the clinical and laboratoristic data of the couple were in the normal range. The karyotype of both partners was also normal.

Interventions: Fertilization of thawed oocytes was achieved by intra cytoplasmic sperm injection (ICSI). ET was performed on day 2.

Main outcome measure: Neonatal outcome in dizygotic twin pregnancy after oocyte vitrification.

Results: Two female babies weighing 2550 and 1880 gr were delivered by caesarian section at 37 week’s gestation. The smaller baby was suspected of being affected of corpus callosum agenesis at ultrasound examinations carried out during gestation. The presence of this defect was not confirmed by neonatal RM that however revealed an obstruction of a liquor vein not requiring surgery. The baby is currently under periodical neurological evaluation.

Conclusions: To our knowledge this is the first reported case of a child born with an obstruction of a liquor vein following oocyte vitrification.