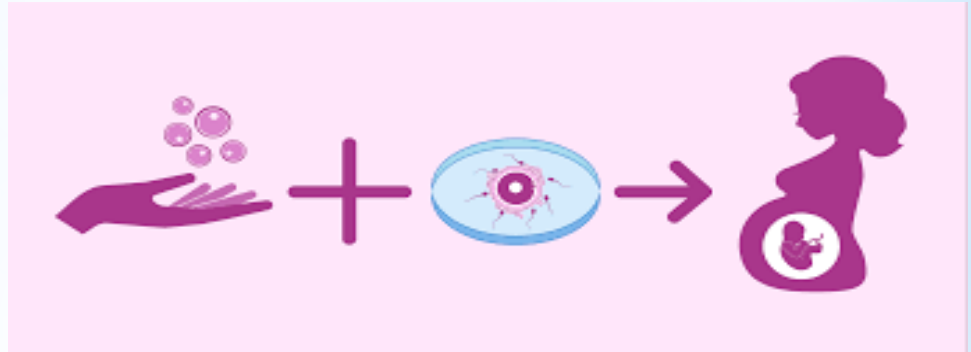


In the name of Allah

Pregnancies of Donor Egg



Nazari L, MD

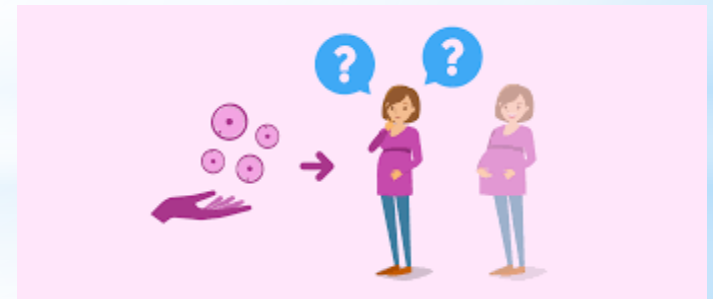
Infertility & IVF fellowship

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■ ***Ovum donation is indicated for:***

- ✓ ***Older women***
- ✓ ***Primary ovarian failure***
- ✓ ***Surgical oophorectomy***
- ✓ ***After radiotherapy or chemotherapy***
- ✓ ***Poor oocyte quality***
- ✓ ***Multiple failures of IVF***
- ✓ ***Genetic disorders***
- ✓ ***Turners syndrome***
- ✓ ***Advanced maternal age***



■ *Donor egg should be:*

✓ *Under 35 years of age, ideally (23-30 years)*

Due to the increased risks of birth defects (such as Down's syndrome) and miscarriage

Eggs from older women may also affect pregnancy rates

✓ *It is a requirement for donors to have a BMI < 30*

For their own safety

✓ *Donors are screened for:*

- *karyotyping*
- *Virology*
- *Psychometric testing*
- *Detailed family history taking*

✓ *It is important that donors are recruited carefully to ensure there are no adverse effects for the subsequent pregnancy*

■ ***IVF treatment can increase the risk of obstetric complications:***

- ✓ ***Hypertensive disorders***
- ✓ ***Gestational diabetes (GDM)***
- ✓ ***Rate of caesarean section (CS)***
- ✓ ***Preterm delivery***
- ✓ ***Post-partum hemorrhage (PPH)***
- ✓ ***Low birthweight***
- ✓ ***Small for gestational age infants (SGA)***

- ***Obstetric Complications in donor egg pregnancies***



■ *Hypertensive Disease*

- ✓ *Most common complication in pregnancies with OD*
- ✓ *Pregnancy-induced hypertension (PIH) and pre-eclampsia (PET): 16 to 40% of women with OD*
- ✓ *PET specifically affecting 3-5% of all pregnancies*

- ✓ *Both OD & IVF pregnancies with autologous ovum increased the risk of PIH and PET compared to those who conceived spontaneously*
- ✓ *PET rates were **3 times** higher in OD pregnancies than those with spontaneous conception*
- ✓ *Rates of hypertensive disease in OD pregnancies compared to autologous IVF: OD were at significantly higher risk, nearly **4 times***

✓ *Twins have a statistically significant increase in both PIH (2.5 times higher) and PET (3.1 times higher) when comparing women with OD to those with autologous ovum*

- *Age factor*

- *Immunological effects on the placenta:*

Rate of hypertensive disease is higher in those who had donor ovum from an unrelated person, compared to when the donor was a sibling

■ *Small for Gestational Age*

- ✓ *Risk of an SGA infant was nearly **2 times** more likely in OD pregnancies than autologous IVF pregnancies*
- ✓ *A meta-analysis of 23 studies found that OD pregnancies are associated with a significantly increased risk of low and very low birthweight*

OD were found to be diagnosed with oligohydramnios more often

■ *Intrauterine Death*

- ✓ *Increased risk, although this was not statistically significant*
- ✓ *There are no meta-analyses reporting on early pregnancy loss or birth defects*

■ *Preterm Delivery*

- ✓ *Increased risk of preterm delivery in OD pregnancies compared to autologous IVF pregnancies (nearly **1.5 times**, with an incidence of **17%**)*



■ *Risk of C/S*

- ✓ *Increased nearly threefold in OD pregnancies compared to autologous IVF pregnancies*
- *Both maternal age and multiple pregnancy were also noted to increase the rate of CS*
- *More elective CS due to the anxiety of the obstetrician with OD pregnancies & IVF due to premature ovarian insufficiency or who were poor responders*

■ ***Post-partum Hemorrhage***

Increased risk in PPH (3.5 times, with an incidence of 4.2-17.3%)

Statistically significant increased risk of blood transfusion and hysterectomies

Risk factors for PPH in OD:

✓ ***Multiple pregnancy***

✓ ***Obesity***

✓ ***Advanced maternal age***

✓ ***Increased chance of requiring an operative delivery***

Finally:

- ✓ Ovum donation is an effective method of ART for women who are unable to utilize their own ovum for IVF***
- ✓ IVF pregnancies are known to be associated with increased risks for both mother and baby, and we now know that OD increases this risk further, specifically with regard to hypertensive disease in pregnancy, PPH and risk of CS***

✓ ***Counseling about:***



- ***Increased risks of ovum donation pregnancies***
- ***Preconception medical review***
- ***Screening for pre-existing disease such as hypertension and diabetes prior to any fertility treatment***

- ✓ ***Advice regarding eSET (elective single embryo transfer)***
- ✓ ***Careful follow-up during the antenatal period***
- ✓ ***Ensure that hemoglobin is optimized prior to delivery, whether that is with oral iron, iron transfusion or blood transfusion***
- ✓ ***Women should deliver in a unit with access to blood transfusion and cell salvage***

Future research:

- ✓ ***Effective strategies to decrease the risks of OD pregnancies to both mother and baby antenatally, in labor, and postnatally***
- ✓ ***Maybe OD should be considered a risk factor for starting aspirin antenatally***
- ✓ ***Uterine artery Dopplers may be useful in this population to identify those more at risk of hypertensive disease in pregnancy***
- ✓ ***Psychological impact of OD pregnancies***



WHERE THERE'S HOPE,
HERE'S NEW LIFE WAITING.

