

# Maternal and fetal complications following oocyte donation to women over 50: is it safe

## Commentary

In 1993 the first reports regarding pregnancies occurring following oocyte donation in women after the age of 50 came.<sup>1</sup> This question has been taken up by the Ethics committee of the American Society of Reproductive Medicine, regarding the issue of oocyte/embryo donation to women who are over 50 years old.<sup>2</sup> In the latest committee opinion in 2013, the available data was reviewed by the committee and they concluded that some women over 50 specially the ones in age range of 50-54 are healthy and prepared for becoming a parent, who are candidates for receiving donated eggs.<sup>2</sup> Though pregnancies in this age group are relatively few, still over 300 births occur in a year in women over 50 years because of fertility treatment in clinics, which report to the Society of Assisted Reproductive Technology.<sup>3</sup>

Despite there being these many numbers, very few report series have looked into the perinatal outcomes and obstetric complications. The cause for that is because of the difficulty in collecting large enough data from a single institution. Thus counseling the prospective recipients of oocyte donation had been based on very little data, with lot of questions still not answered. The question asked is, what extra risk women face over 50 as compared to those who are around 45 years. Is the maternal and neonatal risk strong enough to warrant gestational surrogacy instead of oocyte donation pregnancy. Guedson E et al.<sup>4</sup> gave an experience from a single obstetric unit in France having deliveries over the age of 45-49 and over 50 years. They examined 40 deliveries in women over 50 and 146 deliveries in women between 45-49 following oocyte donation. Since all deliveries took place in a single centre, chances of greater similarity in mode of obstetric treatment among all cases, which allows for a better differentiation of the effect of age in this elderly age group. Hopefully this internal consistency helps to show the risks that are there by conception after the menopausal age.

They found similar complication rates between women around 45-49 age group and those >50. Similar to earlier reports, the outcomes of overall pregnancy rates was good, although multiple gestation rates were 35%. No maternal deaths were reported. Post partum haemorrhage incidence was high which lead to unusually high number of emergency hysterectomies, i.e 4 but it was thought by Guedson et al.<sup>4</sup> that the advanced age of the patients might have resulted in this decision of performing a hysterectomy versus more conservative procedure.<sup>2</sup> Obstetric complications were relatively high in the group as a whole, although little differences were noted in the 2 age groups. Preeclampsia rate was 20% for women between 45-49, and a statistically similar rate of 24% for those >50. Earlier reported series and pregnancies >40 gave a rate of 20-35%, that is consistent with this report although a little higher limit for occurrence of preeclampsia. The only statistically significant difference was found in the rate of fetal growth restriction in singleton pregnancies over 50 years and rate of pregnancy related hypertension in singletons in >50 yrs.

Guedson et al.<sup>4</sup> also looked into twin gestations in particular, and found no statistically significant difference in the outcome of the 2 age groups. But as accepted twin pregnancies had a much higher complication rate as compared to singleton pregnancies, having

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higher incidence of preterm premature rupture of membranes, babies having lower birth weight along with deliveries occurring at an earlier gestation age. In view of the report coming from the single obstetric unit they could help out with the antenatal hospitalization rate, which were similar in the younger and older group, being 69% in to for the twin pregnancy group, and 26% for the singleton pregnancies prior to delivery. No difference was found in the neonatal intensive care units admissions between singleton and with twin gestation group, although duration of neonatal intensive care units admissions was not given.<sup>2</sup>

From these and previous reports one finds that the data are reassuring and with good current day obstetric managements, older pregnancies can get managed with excellent outcomes. Still what is not clear is the threshold of age when major complications get encountered. Also as all these pregnancies are as a result of oocyte donation when does the effect of gamete donation influence the risk of preeclampsia increasing. Only one study looked into age  $\geq 55$  years.<sup>5</sup> They found a 60% incidence of preeclampsia, although only 10 women were included in that particular study by Paulson RJ et al.<sup>5</sup> Since no other studies over 55 years are there besides 8 pregnancies by the same group in age group 52.2 years one should approach that age with caution.<sup>1</sup> Also what is not clear is should preexisting medical conditions be a contraindication for donor oocyte ivf in women over 45 years. Mostly most clinicians avoid patients with preexisting hypertension in view of higher incidence of pregnancy associated with hypertensive disorders of pregnancy. Similarly Schufaro 2014 raised the issue of serious medical, moral social and legal concerns regarding health and welfare of mother and child trying oocyte donation in the 5<sup>th</sup> and sixth decade of life.<sup>6</sup>

Still concluding remarks are that till latest knowledge that exists till date it is known that pregnancies in women over 45 are more complicated than younger women and those recipients of oocyte donation need to be counselled about higher antenatal risks and higher

requirement for hospitalization. Need for single embryo transfer needs to be emphasized with much greater complications of twin gestation.

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## Conflict of interest

The authors declare that there is no conflict of interest.

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