TITLE: TMC FERTILITY CENTRE'S EXPERIENCE IN HRT-FET USING ORA (Non-Invasive endometrium receptivity test)

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Background and Aims: ORA is a non-invasive endometrium receptivity test that runs on NGS to analyse close to 300 miRNAs from maternal blood by Ora algorithm. ORA which able to pin point the optimal time for Personalised ET (pET) had been implemented in our centre since February 2024.

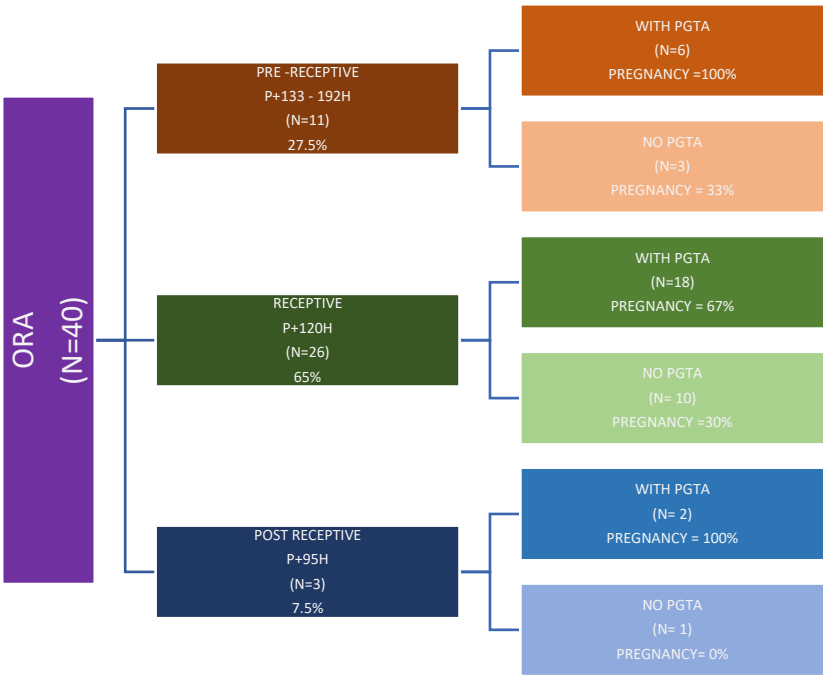
Methods: Data from Feb- Oct 2024 were collected in TMC Fertility Centre, Puchong. FET Patient was subjected to standard HRT regime with P+5, with progesterone given for 120h. Ora was done in unselected population. Patient that are keen for ORA will have blood draw at 120h. Blood sample is centrifuged at 1200xg for 10 mins to separate the plasma which is then stored in buffer and sent for ORA analysis. Personalised ET using HRT was done using ORA timing in upcoming FET cycle, transferring embryos with or without PGTA, with ET lining >6.5mm on ET day. Chi Square test was applied to test for association between group's data, $P<0.05$ considered as significant.

Results: 40 patients underwent ORA with mean age 35.7yo, and 36.1yo in control group. For the Ora results, 65% Receptive WOI, P+120h (n=26),7.5% Post receptive WOI P+95h (n=3) and 27.5% Pre receptive WOI P+133h to 192h(n=11).

In the overall pregnancy following pET, no significant different was observed from all the groups, 61.5% receptive(p=0.20), 66.7% post receptive(p=0.53), and 63.6% pre receptive (p=0.32), compared to control group 48.4% (n= 254). A trend of higher pregnancy rate but not statistically significant was observed when we analysed FET involving only the euploid embryos tested from PGTA, 100% from pre receptive group (n=6)(p=0.99), 100% from post receptive group (n=2)(0.67), and 67% from receptive group (n=18)(p=0.31), compare to control group 54.2% (n=179).

Conclusions:

35% of patient's population who has a displaced WOI might benefited from this test. When we eliminate the embryos genetic factor by transferring only euploid embryos, 100 % of displaced WOI patient pregnant (N=8). While in the receptive group, 66.7% pregnancy achieved (N=18) with euploid embryos. Suggesting eliminating the query from WOI might be able to achieve higher pregnancy rate with euploid embryos. Further study to include the live birth rate should have followed with taking consideration into the discrepancy in the size of the ORA and control groups. With Ora, the non invasive methods of pET, we are hoping to make the entire IVF process more patient friendly, less stressful apart from increasing success rate.


ORA
(N=40)
PRE -RECEPTIVE
P+133 - 192H
(N=11)
27.5%
RECEPTIVE
P+120H
(N=26)
65%
POST RECEPTIVE
P+95H
(N=3)
7.5%
WITH PGTA
(N=6)
PREGNANCY =100%
NO PGTA
(N=3)
PREGNANCY = 33%
WITH PGTA
(N=18)
PREGNANCY = 67%
NO PGTA
(N= 10)
PREGNANCY =30%
WITH PGTA
(N= 2)
PREGNANCY = 100%
NO PGTA
(N= 1)
PREGNANCY= 0%