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**P3**

AUTOPHAGY IN THE HTR-8/SVneo CELL OXIDATIVE STRESS MODEL IS ASSOCIATED WITH NLRP1 INFLAMMASOME ACTIVATION. Meihe Li,1,2,3 Shan Gao,2 Hui-Min Dang.1 Capital Medical University, Beijing, 100061, China; 2First Affiliated Hospital of Xi’an Jiaotong University, Xi’an, 710061, China; 3Department of Traditional Chinese Medicine, Second Affiliated Hospital of Xi’an Jiaotong University, Xi’an, 710004, China.

OBJECTIVE: Based on the establishment of an in vitro model of trophoblast oxidative damage in human placental trophoblast cell HTR-8/SVneo, this study investigated whether there were activation of NLRP1 inflammasomes and excessive autophagy in oxidative stress damage. And further demonstrate whether there is a cascade relationship between the activation of NLRP1 inflammasomes and the phenomenon of excessive autophagy.

METHOD: Western blotting was used to observe the expression level of NLRP1 inflammasome group in the pathological process of trophoblast cell oxidative stress. The expression of LC3-II and Beclin-1 in trophoblast cells after the action of H$_2$O$_2$ was detected by using normal trophoblast cells NLRP1 specific activator (MDP) as a positive control, and the presence of excessive autophagy was determined by comparing with the autophagy-related proteins in normal trophoblast cells. In the trophoblast oxidative stress model, the role of NLRP1 inflammasome activation in CASP1 activation was investigated by interference of RNAi with the expression of NLRP1 gene in trophoblast cells. The role of oxidative stress in NLRP1-dependent inflammatory response was determined by examining the dependence of ROS production in cells on NLRP1 inflammasomes.

RESULTS: In human placental trophoblast oxidative stress, the expression of IL-1β, CASP1, NLRP1, LC3-II and Beclin-1 protein was higher (P < 0.01). MDP treatment could improve the changes (P < 0.01). The expression of IL-1β, CASP1, LC3-II and Beclin-1 protein decreased in siRNA-NLRP1 (P < 0.01).

CONCLUSION: Trophoblast cells showed the expression of NLRP1 protein and excessive autophagy under oxidative stress. At the same time, the activation of NLRP1 inflammasome of trophoblast cells in the state of oxidative stress was correlated with the excessive autophagy.

KEY WORDS: Placental trophoblastic cells; Inflammasome; NLRP1; Autophagy; Oxidative Stress

**P4**

PATIENTS’ PERCEIVED LEVEL OF COUNSELING AND EMOTIONAL SUPPORT, NOT NUMBER OF CYCLES, STRONGLY IMPACTS DECISION REGRET AFTER FAILED AUTOLOGOUS IVF IN WOMEN AGE 42 AND OVER. David Huang,1 Amy Ransohoff,2 John Boscardin,3 Eleni Jaswa,1 Marcelle Cedars,1 Heather Huddleston.1 Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco, CA, USA; 2School of Medicine, University of California, San Francisco, CA, USA; 3Department of Medicine, University of California, San Francisco, CA, USA.

BACKGROUND: An increasing number of women ≥ 42 years old choose to pursue autologous IVF (aIVF) despite low success rates in this age group. Few data exist on these patients’ reflections on their decision after aIVF.

OBJECTIVE: To quantify the level of decision regret in women age 42 and over who underwent aIVF and identify factors associated with moderate/severe regret, particularly in those who were unsuccessful.

MATERIALS AND METHODS: We performed a retrospective cohort survey study. Between 2012-2018, 463 women ≥ 42 years old underwent aIVF at a single academic institution. Patients were invited to participate in an online survey that contained 38 items, including the validated Decision Regret Scale (DRS) as well as items examining demographics, perceived adequacy of information/counseling and emotional support.

RESULTS: Of the 463 eligible participants, 70 (15.1%) obtained at least aIVF and 393 (84.9%) did not. The survey was completed by 99 respondents; response rate was 48.5% (n=34) in those who obtained a live birth and 15.3% (n=60) in those who did not. Mean age was 42.9y at the time of IVF (IQR 42-44y), and the elapsed time between survey and last IVF averaged 4.4y (IQR 2.43 – 5.87y). Five patients were excluded from analysis due to ongoing treatment at time of survey. Of the 94 eligible respondents, median DRS score was 10 (interquartile range 0-30) and the mean was 17.1 (range 0-70). 73% (n=69) had absent to mild regret, and 27% (n=25) had moderate/severe regret after aIVF. Having no live births was associated with increased regret (OR 22 [95% CI 2.82 – 171.82], p = 0.003). Among those who were unsuccessful, 40% (n=24) had moderate/severe regret. Predictors for moderate/severe regret in this group included insurance coverage status (OR 3.33 [95% CI 1.02-10.90], p=0.048), perceived adequacy of information/counseling (OR 0.44 [95% CI 0.25 – 0.77], p=0.004), and perceived adequacy of emotional support (OR 0.29 [95% CI 0.15-0.55], p<0.001).

CONCLUSION(S): Autologous IVF carries a low success rate and a considerable risk of decision regret in women ≥ 42 years old. In those who were unsuccessful, 40% endorsed moderate/severe regret in their decision to undergo aIVF. Perceived adequacy of information/counseling and emotional support were the strongest predictors that influenced their level of regret. Providers should be forthcoming regarding the low success rate and offer adequate emotional support when providing treatment to this patient group in order to decrease their level of long-term regret.

FINANCIAL SUPPORT: none

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number of oocytes retrieved, number of oocytes fertilized, number of blasto-
cysts formed, and number of euploid embryos.

RESULTS: 274 cycles were included in this comparison. There were no
clinic visits in April of 2020, as per the ASRM guidelines to suspend fertility
treatments during that time. While there were several significant differences
found throughout the values measured between the two years, there were no
consistent or meaningful patterns found in either patient demographics or
ART outcomes.

CONCLUSIONS: In contrast to previously published work, we did not
find any meaningful differences in either patient demographics or ART out-
comes in cycles performed during the COVID-19 pandemic compared to cy-
cles performed the previous year. Whether these finding represent regional
differences related to COVID-19 remains to be elucidated.

FINANCIAL SUPPORT: None

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CONCLUSIONS: This model can be used for continuous quality control
assessment of dichotomous IVF outcomes such as pregnancy rates after
euploid embryo transfer.

KEY WORDS: in vitro fertilization, euploid embryo transfer, quality con-
trol, control chart, key performance indicator

P7

NON-TUBAL ECTOPIC (NTE) PREGNANCIES IN ASSIS-
TED REPRODUCTIVE TECHNOLOGY (ART): 10-YEARS
OF EXPERIENCE AT A LARGE URBAN UNIVERSITY
BASED FERTILITY CENTER. Francesca Barrett, MD,
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York, NY, USA; 2 NYU Langone Prelude Fertility Center, New York, NY, USA.

BACKGROUND: Non-tubal ectopic (NTE) pregnancies account for 7-
10% of ectopic pregnancies, but disproportionately high mortalities.1,2 In-
fertility and assisted reproductive technology (ART) are risk factors, but
limited data exists on NTE from fertility centers.1

OBJECTIVE: The purpose of this case series was to review all confirmed
NTEs at a high-volume fertility center to gain insights into diagnosis and out-
comes.

MATERIALS AND METHODS: NTE from all pregnancy cycles (sponta-
nous [SPON], ovulation induction (OI), frozen embryo transfer (FET), Fresh
ET, donor egg (DE)) were included over a 10 year period (2009-
2019). Ultrasounds were performed in our center, and confirmed by outside
radiologist. Cases were reviewed for medical, surgical and fertility history,
NTE diagnosis and management, and subsequent pregnancy outcomes. Rates
are reported as % or median (range).

RESULTS: 15 NTEs were identified; 9 cornual (7 ART, 2 SPON), 5 cesar-
ean scar (C-scar, all ART) and 1 cervical (SPON). No abdominal or ovarian
NTE were identified. No NTE resulted from OI. Age at diagnosis was 40
years (31-51). Infertility diagnoses and type of ART cycles were mixed
(53% FET, 13% fresh ET, 20% DE, 60% euploid embryo). The majority of
NTEs presented without symptoms (47%) or with vaginal bleeding (40%).
Median cycle day (CD) of diagnosis was CD 42 (37-52) by outside ultra-
sound for cornual and c-scar NTEs. The cervical NTE was initially diagnosed
as pregnancy failure on CD 45, with final diagnosis on CD 77. 83% of NTE
from ART had a human chorionic gonadotropin (hCG) CD 28 level <70mIU/
ML and 67% had a hCG CD 35 level <1000mIU/mL. All C-scar NTEs and
44% of cornual NTEs had fetal cardiac activity. 1st line treatment included
medical and surgical approaches: expectant management (5), single dose
methotrexate (MTX) (4), combination MTX (1), misoprostol (1), D&C (3),
laparoscopy (2), 47% failed, including 100% of single dose MTX. 2nd line
treatment included single dose MTX (2), multidose MTX (2), double uterine
balloon (1) or D&C (3). 1 C-scar NTE hemorrhaged requiring transfusion
and uterine artery embolization. Median CD of resolution was 96 (67-
159). 60% of patients tried for pregnancy at our center after resolution of
NTE: 27% had a successful live birth or ongoing pregnancy. Interestingly,
2 patients with cornual NTE had histories of bilateral salpingectomy, present-
lying with high hCGs (21,361 and 31,819), failed initial management (MTX
sequent MTX), and took the longest time to resolution (CD 157 and CD 159).
Of these 2 cornual NTEs: 1 became pregnant on a subsequent ART cycle; the
other has not attempted further treatment.

CONCLUSIONS: NTEs are rare, even in high volume fertility clinics. Early
sonographic diagnosis and close monitoring can prevent morbidities,
but first line treatments often fail. Day 28 and 35 hCG levels can be useful
in risk assessment, diagnosis and patient counseling. Patients with history
of bilateral salpingectomies may require closer evaluation and longer time
to resolution of cornual NTEs.

SUPPORT: No financial support to disclose

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P6

DESIGN AND VALIDATION OF A MODEL FOR QUAL-
ITY CONTROL MONITORING OF DICHOTOMOUS
IVF OUTCOMES. Michael Awadalla, MD,1 Sue Ingles,
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of Southern California, Los Angeles, California.

BACKGROUND: Performing quality control for dichotomous outcomes
such as pregnancy and live birth is challenging. A method for continuous
assessments of outcomes using a moving average is preferred over monthly
assessments of dichotomous outcomes such as pregnancy rates. However,
warning and control limits for control charts would need to be thoughtfully
assessed euploid embryo transfer quality control based on fetal heartbeat rate
monitoring of dichotomous IVF outcomes such as pregnancy failure after euploid
embryo transfer.

MATERIALS AND METHODS: We designed and validated a model to
assess euploid embryo transfer quality control based on fetal heartbeat rate
after euploid blastocyst transfer. The model uses three weighted moving av-
erages with window sizes of 21, 51, and 101 embryo transfers to detect both
short and long-term shifts in success rates of fetal heartbeat per euploid em-
bro transfer. The quality warning limit was set to have a two-sided type I
error rate of 0.30 per 100 embryo transfers and the control limit set to have a
type II error rate of 0.05 per 100 embryo transfers. Simulation studies were
performed to validate the model through assessment of type I and type II
errors using custom computer programs.

RESULTS: Quality warning limits and control limits are presented for a
range of expected fetal heartbeat rates. For an expected fetal heartbeat rate
of 50%, or 0.50, the 101-transfer average had a warning limit of 0.50 ±
0.110 and a control limit of 0.50 ± 0.156. The 51-transfer average had a
warning limit of 0.50 ± 0.180 and a control limit of 0.50 ± 0.236. The 21-
transfer average had a warning limit of 0.50 ± 0.310 and a control limit of
0.50 ± 0.380. The power to detect a 20% decrease from an expected fetal
heartbeat rate of 50%, when the decrease persisted for 50 embryo transfers,
was 86% for the warning limit and 57% for the control limit.

CONCLUSIONS: This model can be used for continuous quality control
assessment of dichotomous IVF outcomes such as pregnancy rates after
euploid embryo transfer.

KEY WORDS: in vitro fertilization, euploid embryo transfer, quality con-
trol, control chart, key performance indicator