AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE
64th Annual Meeting

Filename: 650527
Submission Type: Scientific Abstract (Oral/Poster)
Contact/Presenting Author: Amr Kader, M.D.
Department/Institution: Center for Reproductive Medicine, Cleveland Clinic
Address: E 9500, Euclid Avenue, Desk A 19.1, Andrology lab
City/State/Zip/Country: Cleveland, United States
Phone: 1-216-444-9485  Cell Phone:  Fax: 1-216-445-6049  E-mail: agarwaag@ccf.org

Abstract Category: 25. Procedures and Techniques-Laboratory: ART (SART)
Abstract Topic: 29. Oocyte Biology
Poster presentation only? Yes
Are you a fellow in training in an American Board of Obstetrics and Gynecology approved program leading to certification in Reproductive Endocrinology and Infertility? No
Data is submitted for a separate scientific abstract and video presentation: No

Awards:
IRB Approval: No human subjects or human tissue was utilized in the studies described in the abstract.
ACCME Disclosure: The Accreditation Council for Continuing Medical Education (ACCME) requires full disclosure of discussion of off-label or otherwise non-FDA approved uses of a product. I will be disclosing this by: Verbal
Permissions - Prior Publication or Presentation: The abstract contains original work, not published previously or presented at a meeting of another national or international scientific organization prior to this meeting.
Six Author Rule: All authors named in this abstract have agreed to its submission for presentation at the 63rd Annual Meeting of the American Society for Reproductive Medicine and are familiar with the 6-author rule.
Accept Complete Responsibility: I accept complete responsibility for the data at the time of submission.

Title: EVALUATION OF DIFFERENT ISOLATION METHODS FOR PRIMORDIAL FOLLICLE ON THE VIABILITY AND MORPHOLOGY OF THE FOLLICLE-GRANULOSA COMPLEX
Objective: Isolated primordial follicles are currently being investigated for potential use in IVM/ fertility preservation. The objective of our study was to assess the viability and morphology of the primordial follicles isolated after non-enzymatic or different enzymatic treatments using varying tissue thickness and enzyme exposure time.

Design: Prospective in vitro study

Materials and Methods: 8 ovaries from 4 pigs were obtained immediately after euthanasia. After removal of the hilar tissue, each cortex was divided into 6 equal parts and chopped using Mcwillian tissue chopper. Groups 1-4 were chopped at 87.5 μm and placed in buffered culture media. Group 1 = frequently pipetted for 10 min. Groups 2-4 were exposed to the liberase enzyme (0.04 mg/mL) for 60, 75 and 105 min. respectively. Groups 5 and 6 were chopped at 500 μm and were exposed to the enzyme for 75 and 105 min respectively. For morphological evaluation, formalin fixed follicles were stained with DAPI and scored as: 1 = spherical with intact granulosa cells; 2 = irregular shape with intact granulosa cells; 3 = irregular with < 10% granulosa cell loss; 4 = totally atypical shape with 10-50% granulosa cell loss and 5 ≥50% granulosa loss or total extrusion of the oocyte. Viability was evaluated using 2μM calcein (viable cells) & 5μM ethedium homodimer (dead cells). Viability was scored as: 0 = follicles with all oocyte granulosa cells (GC) viable; 1 = < 10% of dead GC; 2 = 10-50% dead GC; 3 = dead oocytes or > 50% dead GC.

Results: Morphology in group 1 was significantly better compared with all other groups irrespective of the treatment time or thickness of the tissue. Follicular viability was superior in the non-enzymatic isolation group compared with all other groups, however, the values were not significant due to the small sample size

Conclusions: Enzymatic treatment affects the morphological integrity of the follicular granulosa complex. An isolation technique optimizing viability, morphological integrity and maximum yield of primordial follicles is needed for further applications of isolated primordial follicles.

Support: None

Author: Amr Kader, M.D.
Department/Institution: Center for Reproductive Medicine, Cleveland Clinic
Address: E 9500, Euclid Avenue, Desk A 19.1, Andrology lab
City/State/Zip/Country: Cleveland, United States
Phone: 1-216-444-9485  Cell Phone: 1-216-445-6049  E-mail: agarwaa@ccf.org

Yes - Neither I nor my spouse/partner have a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices.
No I receive a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No My spouse/partner receives a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No I refuse to disclose my commercial or financial interests or relationships with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. If you check this box, you will not be allowed to participate in this CME activity.

Author: Maria Enciso, M.S.
Department/Institution: University of Madrid
Address: Madrid, United States
Phone: Cell Phone: Fax: E-mail: agarwaa@ccf.rog

Yes Neither I nor my spouse/partner have a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices.

No I receive a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No My spouse/partner receives a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No I refuse to disclose my commercial or financial interests or relationships with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. If you check this box, you will not be allowed to participate in this CME activity.
Yes
Neither I nor my spouse/partner have a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices.

No I receive a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No My spouse/partner receives a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No I refuse to disclose my commercial or financial interests or relationships with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. If you check this box, you will not be allowed to participate in this CME activity.

Yes
Neither I nor my spouse/partner have a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices.

No I receive a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):
No My spouse/partner receives a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No I refuse to disclose my commercial or financial interests or relationships with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. If you check this box, you will not be allowed to participate in this CME activity.

Author: Rakesh Sharma, Ph.D.
Department/Institution: Cleveland Clinic
Address:
City/State/Zip/Country: Cleveland, United States
Phone: Cell Phone: Fax: E-mail: agarwaa@ccf.org

Yes Neither I nor my spouse/partner have a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices.

No I receive a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No My spouse/partner receives a commercial or financial interest or relationship with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. Please list source(s) and relationship(s):

No I refuse to disclose my commercial or financial interests or relationships with manufacturers of pharmaceuticals, laboratory supplies and/or medical devices. If you check this box, you will not be allowed to participate in this CME activity.