P-24 The Comparison of Angiogenic Factor Levels between Mouse Ovarian Tissues with Vitrification and Slow-freezing

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Objectives: Angiogenic factors are essential for neovascularization in frozen-thawed ovarian tissue. This study was conducted to evaluate and compare the vascular endothelial factor (VEGF) and angiopoietin after cryopreservation of mice ovarian tissue using vitrification and slow-freezing method.

Methods: The ovaries recovered from ICR mouse were divided into three groups: 1) ovarian tissue without cryopreservation (control, group I), 2) ovarian tissue vitrified with VFS-40 (vitrification, group II), and 3) ovarian tissue slowly frozen with DMSO (slow-freezing, group III). Thawing was carried out at room temperature. RT-PCR was used to identify the levels of VEGF and angiopoietin in mouse ovarian tissue.

Results: mRNA levels of VEGF-1 and -3 were significantly decreased in group II and III than group I (control) ($p<0.05$). VEGF-1 and -3 mRNA levels was significantly lower in group II than in group III ($p<0.05$). mRNA levels of angiopoietin-1 and -2 were significantly decreased in group II and III than group I (control) ($p<0.05$). Angiopoietin-1 mRNA level was significantly lower in group II than in group III ($p<0.05$), whereas angiopoietin-2 mRNA level was not significantly different between group II and III.

Conclusion: These results show that VEGF and angiopoietin could be damaged by cryopreservation of ovarian tissue. Slow-freezing seem to be better method for preservation of VEGF and angiopoietin than vitrification of the mouse ovarian tissue.

P-25 VEGF Level in Ovarian Tissues after Heterotopic Autotransplantation in ICR Mice

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Objectives: The ovarian tissue banking is a promising technique for the preservation of fecundity in young female cancer patients. Revascularization plays a critical role in successful ovarian tissue transplantation, and vascular endothelial growth factor (VEGF) is a principal factor that promotes neovascularization. This study was designed to access the VEGF levels in cryopreserved ovarian tissue after heterotopic autotransplantation in ICR mosue.

Methods: The ovarian tissues were obtained from 5 or 6 weeks aged ICR mouse. Ovarian tissues were divided into three groups: 1) ovarian tissue without cryopreservation (control, group I), 2) ovarian tissue vitrified with VFS-40 (vitrification, group II), and 3) ovarian tissue slowly frozen with DMSO (slow-freezing, group III). Thawing was carried out at room