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Aberrant Apoptosis in Chorionic Villi is Involved in Recurrent Miscarriage

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Introduction: Apoptosis, programmed cell death, is a cellular process in development and tissue homeostasis. Abnormalities in cell death control can lead to various diseases, including cancer, autoimmunity, and degenerative disorders. Apoptosis is a rare event in several reproductive tissues including human placenta. The causes of unexplained recurrent miscarriage is not fully understood. However, most of researches have been focused on immune mechanisms of maternal-fetal interface. In these studies, we investigated whether apoptosis in chorionic villi is associated with recurrent pregnancy loss.

Materials and Methods: We previously performed cDNA subtractive hybridization analysis in fetal chorionic villi from normal patients and RPL patients, showing different expression level of apoptosis-related genes. Therefore, we investigated whether apoptosis is aberrant in chorionic villi from recurrent pregnancy loss (RPL) patients. Expression level of genes including Fas, FasL, Bax, Bid, Bad, caspase 3, caspase 6, caspase 7, caspase 8, caspase 9, caspase 10, and caspase 12 was analyzed by the intensity of the EtBr staining by Gel-Doc and reverse northern blot analysis.

Results: In these results, we demonstrated the different expression level of 12 apoptosis-related genes. Expression levels for apoptosis-related genes showed higher in chorionic villi from RPL patient than those from normal control. In addition, expression pattern by reverse northern blot analysis will be analyzed.

Conclusions: RT-PCR analysis revealed that apoptosis-related genes expressed more in the chorionic villi with RPL patients than normal controls, suggesting that aberrant apoptosis could be one of reasons that may lead to recurrent spontaneous abortion during early human development. The molecular mechanisms for this phenomenon have to be elucidated for finding their therapeutic methods.

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미성숙난자-시험관아기 Program에서 채취된 미성숙난자의 배양 및 포배기배아의 발생에 관한 연구

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목 적: 본 연구의 목적은 미성숙난자-시험관아기 program의 포배기배아 이식을 실시한 예에서 1) 채취된 난자의 주변에 쌓여 있는 난구 세포들의 양상에 따른 난자의 성숙시간 및 포배기배아 발생율을