



Are zona pellucida genes involved in recurrent oocyte lysis observed during in vitro fertilization?

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Résumé en anglais	<p>PURPOSE: Complete oocyte lysis in in vitro fertilization (IVF) is a rare event, but one against which we remain helpless. The recurrence of this phenomenon in some women in each of their IVF attempts, regardless of treatment, together with the results of animal experiments led us to investigate the possible involvement of the genes encoding for the glycoproteins constituting the zona pellucida (ZP). PATIENTS & METHODS: Over the last ten years, during which we treated over 500 women each year, three women suffered recurrent oocyte lysis during their IVF attempts in our Centre for Reproductive Biology. For each of these three cases, we sequenced the four genes and promoter sequences encoding the glycoproteins of the ZP. The sequence variations likely to cause a change in protein expression or structure, were investigated in a control group of 35 women who underwent IVF without oocyte lysis and with normal rates of fertilization. RESULTS & CONCLUSION: We found no mutations in the ZP genes sequenced. Only some polymorphisms present in the control group and in the general population were detected, excluding their specific involvement in the phenotype observed. Thus, although we suspected that complete oocyte lysis was due to a genetic cause, it did not seem possible to directly incriminate the genes encoding the proteins of the ZP in the observed phenotype. Further study of the genes involved in the processing and organization of ZP glycoproteins may allow elucidation of the mechanism underlying recurrent oocyte lysis during in vitro fertilization.</p>

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