Journal of Reproductive Immunology

Volume 46, Issue 2, March 2000, Pages 155-166

Hypothesis

Correlation between oral sex and a low incidence of preeclampsia: a role for soluble HLA in seminal fluid?

Carin A Koelman [a], Audrey B.C Coumans [b], Hans W Nijman [b], Ilias I.N Doxiadis [a], Gustaaf A Dekker [b], Frans H.J Claas [a]

Show more

https://doi.org/10.1016/S0165-0378(99)00062-5

Abstract

The involvement of immune mechanisms in the aetiology of preeclampsia is often suggested. Normal pregnancy is thought to be associated with a state of tolerance to the foreign antigens of the fetus, whereas in preeclamptic women this immunological tolerance might be hampered. The present study shows that oral sex and swallowing sperm is correlated with a diminished occurrence of preeclampsia which fits in the existing idea that a paternal factor is involved in the occurrence of preeclampsia. Because pregnancy has many similarities with transplantation, we hypothesize that induction of allogeneic tolerance to the paternal HLA molecules of the fetus may be crucial. Recent data suggest that exposure, and especially oral exposure to soluble HLA (sHLA) or HLA derived peptides can lead to transplantation tolerance. Similarly, sHLA antigens, that are present in the seminal plasma, might cause tolerance in the mother to paternal antigens. In order to test whether this indeed may be the case, we investigated whether sHLA antigens are present in seminal plasma. Using a specific ELISA we detected sHLA class I molecules in seminal plasma. The level varied between individuals and was related to the level in plasma. Further studies showed that these sHLA class I molecules included classical HLA class I alleles, such as sHLA-A2, -B7, -B51, -B35 and sHLA-A9. Preliminary data show lower levels of sHLA in seminal plasma

in the preeclampsia group, although not significantly different from the control group. An extension of the present study is necessary to verify this hypothesis.

Previous Next

Keywords

Soluble HLA; sHLA-I; Preeclampsia; Sperm; Tolerance; Oral sex

Recommended articles Citing articles (0)