

**PARENTAL SHARING OF HUMAN LEUCOCYTE ANTIGENS ASSOCIATED WITH REPEATED FETAL LOSS**

ROSEMARY M. HARRIS, M.D., and JAMES A. HARRIS, M.D.

Human leucocyte antigen (HLA) types were compared for the parents and fetuses of 20 couples with repeated fetal loss and 10 couples with a single fetal loss. Sharing of HLA antigens between parents and fetuses was found to occur more frequently in HLA-A and -B loci than in HLA-C, -D, -E, -F, -G, -I, -J, -K, -L, -M, -N, -O, -P, -Q, -R, -S, -T, -U, -V, -W, -X, -Y, and -Z loci. The frequency of sharing was found to be significantly higher in the obligatory antigens compared to that of optional antigens.

**INTRODUCTION**

Human leucocyte antigens are highly complex and are under genetic control. Immunological alterations from one of the important factors in the causation of recurrent abortions in some individuals (Kosloski et al., 1977). A fetus is considered to be an allograft and a successful pregnancy should have an immune response to the fetus for the fetal histocompatibility antigens which pass to the placental wall. There are reports to show that a large number of couples with history of abortion share common HLA antigens (Taylor and Peck, 1981; Beer et al., 1981; Usander and Ojila, 1983). In the light of these findings it was

thought desirable to investigate parental sharing of human leucocyte antigens in couples with repeated fetal loss to assess the role in pregnancy wastage in this population.

**MATERIALS AND METHODS**

Tissue typing was performed on the peripheral blood lymphocytes (PBL) of husband and wives of 31 couples by two-stage lymphocytotoxicity method (Gallo et al., 1981) using the starter kit sera from NIH (1980). Couples were typed for HLA-A, -A and -B alleles. The NIH starter kit and the local sera covered 12 specificities on HLA-A locus (A1, A2, A3, A8, A24, A10, A26, A11, Aw25, Aw1, Aw22, Aw23) and 17 specificities of HLA-B locus (B7, B8, B12, B13, B14, B16, B17, B18, Bw21, Bw22, B17, Bw35, B40, Bw41, Bw31).

Dept. of Obst. & Gyn. & Fertility Services, St. A. & M. Post Graduate Inst. of Basic Med. Sci., London. Accepted for Publication on 26.02.1987

Table 1

Group Type for HLA Analysis

Group	No.	%
Control	1	2.5
Case	3	7.5

Group labels are not to be confused with the HLA analysis

Experiment group Control group  
n = 14

Group	No.	%
Control HLA type	1	7.1
Case HLA type	3	21.4

**INTRODUCTION**

The present study was carried out as part of a larger study of 11 couples with repeated fetal loss and 19 couples with a single loss of fetus at one or two lost pregnancies. The frequency of sharing of HLA antigens was found to be significantly higher in case couples compared to that of control couples.

There are reports to show that a low number of couples with history of recurrent miscarriages (Recurrent Miscarriage Syndrome) have HLA antigens (A1, B2, Cw3) in the family. In the study of these findings it was found that the HLA antigens (A1, B2, Cw3) were shared in 13% of the families. The HLA antigens (A1, B2, Cw3) were shared in 13% of the families. The HLA antigens (A1, B2, Cw3) were shared in 13% of the families.

**MATERIALS AND METHODS**

The study was performed on 14 couples with a history of recurrent miscarriages. The HLA antigens (A1, B2, Cw3) were shared in 13% of the families. The HLA antigens (A1, B2, Cw3) were shared in 13% of the families.

Total live	11	16	18
(biological age is noted)	11	16	18
35 - Full term	0	1	3
Infant mortality	0	2	3
Live children	0	14	15
Couples sharing common HLA antigens	4 (37.14%)	10 (62.5%)	14 (66.7%)

<sup>a</sup>  $p < 0.05$  significant

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