Spontaneous antepartal RhD alloimmunization

Holuskova I.[1], Lubusky M.[2,3], Studnickova M.[2], Prochazka M.[2]

[1]Department of Transfusion Medicine, University Hospital, Olomouc, Czech Republic
[2]Department of Obstetrics and Gynecology, University Hospital, Olomouc, Czech Republic
[3]Department of Medical Genetics and Fetal Medicine, University Hospital, Olomouc, Czech Republic

AIM OF THE STUDY

Determine the incidence of spontaneous antepartal RhD alloimmunization in RhD negative pregnant women with an RhD positive fetus.

METHODS

A total of **411** RhD negative women with an RhD positive fetus and without the presence of anti-D alloantibodies at the beginning of pregnancy were examined. RhD blood group of the pregnant women was determined in the I. trimester of pregnancy, RhD status of the fetus was determined after delivery. Screening for irregular antierythrocyte antibodies was performed in all women in the I. trimester of pregnancy, at 30-32 weeks gestation, immediately prior to delivery at 39-42 weeks gestation, and also at 6 months following delivery. Antibody screening was performed using the indirect antiglobulin (LISS/NAT) and enzyme (papain) test with their subsequent identification using a panel of reference erythrocytes by column agglutination method Dia-Med. After delivery, the volume of fetomaternal hemorrhage was determined in all RhD negative women and RhD alloimmunization prophylaxis was performed by administring the necessary IgG anti-D dose; none of the women were administered IgG anti-D antepartally.

RESULTS

During screening for irregular antierythrocyte antibodies at 30-32 weeks gestation, no anti-D alloantibodies were diagnosed in any of the women (0/411); immediately prior to the delivery at 39-42 weeks gestation, anti-D alloantibodies were diagnosed in **2%** of the women (8/411) and repeatedly even at 6 months following delivery (8/210). In 201 women, examination at 6 months following delivery was not performed, therefore in these women spontaneous antepartal RhD alloimmunization cannot reliably be ruled out. If anti-D alloantibodies were not present prior to the delivery, these women were all administered IgG anti-D in a dose of at least **125 µg** after delivery.

2%

CONCLUSION

In RhD negative women with an RhD positive child, the incidence of spontaneous antepartal RhD alloimmunization in the III. trimester of pregnancy was at least 2%. Most cases may theoretically be prevented by prophylactic administration of **250 µg** of **IgG anti-D** to all **RhD negative women at 28 weeks gestation.**

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