O 62. PRENATAL DETERMINATION OF FETAL RHESUS D STATUS IN ALLOIMMUNIZED RH D-NEGATIVE PREGNANT WOMEN

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ABSTRACT: RHD genotyping based on the control of only a specific RHD sequence, exon 7, may be a reasonable and non high-cost test for the Albanian population. In most countries D typing is routinely performed in all blood donors, transfusion recipients and pregnant women. Consequently, clinical complications due to mismatched transfusions are infrequent, but despite the use of immunosuppressive therapy with anti-D immunoglobulin prophylaxis, D alloimmunization in pregnancy still occurs. The present paper aims at determining Rhesus D status of the foetus in the alloimunized D-negative pregnant women. Twenty eight positive IAT mothers with high value of antibodies titration were in the present investigation selected. With consent, DNA was extracted from amniocytes to identify the foetal RHD gene-specific sequence with the use of PCR. Identification of RHD exon 7 was performed via polymerase chain reaction (PCR) with sequence-specific primers (SSP) RHD exon7s and RHD exon7a that generates a 93-base pair (bp) product, while a 97-bp GAPDH gene sequence was amplified in parallel with primers GAPDH R7s and GAPDH R7a to serve as a control of amplification. A normal D-positive sample, a normal D negative sample and a no template control (NTC) comprised the internal controls for PCR amplification. All amplifications were subsequently analysed using agarose gel electrophoresis. Seventeen samples (85%) amplified the RHD exon 7 sequence. Only 4 samples (15%) did not amplify. The foetuses were respectively qualified as RhD positive and RhD negative. These results correlated perfectly with the serological Rh typing of the new-borns. In this study, a molecular analysis was standardized to identify a specific sequence of the fetal RHD gene.

Keywords: RhD alloimmunization, Rh-blood system, RHD genotyping