

Study of Cytokin Profile of Fetutes and Newborn Infants in Pregnant Women Subjected to Rhesus- Immunization

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Abstract: This in the article Rhesus immunization encountered pregnant in women and their new born in babies cytokine status analysis Research during the II and III trimesters Rhesus immunization 40 identified pregnant woman , also intrauterine blood casting practice done and traditional treated new born in babies cytokines profile studied. Research results IL-6 and TNF- α level increase inflammation processes increase in IL-10 levels decrease and to inflammation against the answer to weaken showed. Intrauterine blood casting technology hemolytic of processes weight in reduction efficiency with separated stood. This neonatal hemolytic results the disease prevent to take and treatment for important clinical the basics presented will reach.

Keywords: Rhesus immunization, Fetus cytokines, hemolytic disease, IL-6, TNF- α , New born babies, Immune answer.

Login. Rhesus immunization pregnancy during mother organism and fetus between immunological conflict as manifestation is, this process hemolytic disease development main reason This is pathology mother blood and fetus blood between Rhesus antigens difference as a result appearance will be. Mother organism fetus erythrocytes relatively antibodies working releases, this and fetus erythrocytes hemolysis and with him related heavy complications to the surface to come take is coming.

Rhesus immunization with related hemolytic of the disease speed and weight pregnancy during, especially the second and third in trimesters sharp increases. Research this shows that mother organism by working issued Rhesus antibodies placenta through fetus blood rotation to the system enter , erythrocytes breaks down and hemolytic anemia , hyperbilirubinemia and even death at risk take comes (Larsen meat al ., 2017; Kaur meat al ., 2020). This of the process pathogenesis complicated be, in this one row immune and biochemical factors, including cytokines system participation important importance profession will reach .

Scientific in literature record It is believed that Rhesus immunization fetus and mother immune system between complicated of relationships to the violation reason is , in this cytokines system important role Cytokines play a role in immune the answer regulatory signaling molecules they are in the body inflammation processes order Cytokines level changes not only hemolytic of the disease weight defines , perhaps fetus and mother organism general immunological also affects the condition (Smith et al., 2020; Brown et al., 2019) . Especially for inflammation cause

cytokines (IL-6, TNF- α) levels increase and to inflammation against cytokine (IL-10) levels decrease hemolytic of processes to increase reason will be .

Pregnancy during cytokines balance violation hemolytic disease pathogenesis for solution doer importance has IL- 6, IL-10 and TNF - α level noticeable changes with Especially IL - 6 and TNF - α of high concentration inflammation processes enhances IL- 10 low and to inflammation against of mechanisms weakening with related (Jones et al., 2018).

Rhesus immunization other important aspects one this pregnancy during hemolytic processes dynamics is learning. In this fetus feed and oxygen with in the provision disorders, placenta function weakening and in the body inflammation processes mutual is related. Modern diagnostic methods, in particular, ultrasound and transabdominal choriodocentesis through fetus of blood cytokine profile determination opportunity gives, this and treatment methods own on time choice for is important (Harrison et al., 2019).

With this together , modern perinatal technologies, such as intrauterine blood transfusion , hemolytic of the disease weight to reduce help This gives technologies pregnancy complicated to pass prevent in receiving important importance has they are through immune the answer stabilization and fetus status improve possible (Davis et al., 2021). Research this shows that intrauterine blood casting through fetus erythrocytes is restored, this and inflammation processes reduces and fetus general status improves.

This of the research purpose – Rhesus immunization encountered pregnant in women fetus and new born babies cytokine profile study and hemolytic in illness feto -maternal technologies the impact from evaluation consists of.

Research material and method.

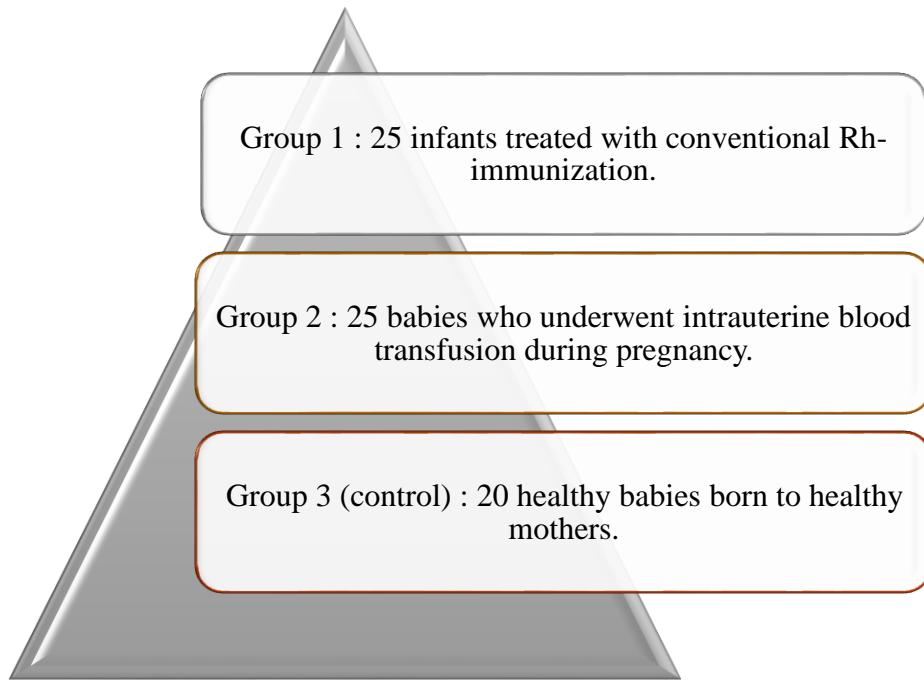
Research object In the study 60 people in total pregnant woman and 70 people new born baby participated. Pregnant women three to the group divided into:

Group 1 : 20 pregnant women diagnosed with Rh-immunization in the second trimester.

Group 2 : 20 pregnant women diagnosed with Rh-immunization in the third trimester.

•Group 3 (control) : 20 healthy pregnant women.

All pregnant transabdominal choriocentesis for women using navel from the vein blood taken, cytokine profile analysis New born babies are also three to the group divided into :



Immunological research Cytokine profile and immunological indicators Uzbekistan Republic Sciences academy Immunology at the institute modern equipment using studied .

Research results.

1. Fetus in the blood cytokine profile:

- Rhesus immunization encountered IL-6 and TNF- α cytokines in pregnant women amount noticeable at the level increase observed . Especially in the second trimester in the group this indicators high was.
- IL-10 levels decrease to inflammation against of the answer weakened These indicators control to the group relatively It was much lower.

2. New born babies cytokine profile:

- Traditional treated IL-6 and TNF- α in infants cytokines level high is , this hemolytic of processes increased confirmed.
- Intrauterine blood casting practice done IL-10 levels in infants high, their to inflammation against immune answer improved.
- Control in the group IL-6 and TNF- α in infants standard at the level was, this and hemolytic processes not observed showed.

3. Cytokines dynamics according to observations:

- Fetus IL-6 levels in the blood increase hemolytic processes development early signs as manifestation it has been.
- Intrauterine blood casting held IL-10 in infants relatively high at the level to be , this of the treatment to inflammation against impact strong that confirmed.

4. Trimester according to differences:

- second trimester hemolytic processes stronger cytokines imbalance further noticeable IL-6 and TNF - α of high indicators fetus danger to the group entrance showed .
- third trimester hemolytic processes relatively lower was , but still pathological indicators However, intrauterine blood pouring Efficiency is also high in the third trimester was.

5. Additional observations :

- Hemolytic processes in the background fetus and babies general clinical status deteriorated , this and plasma cytokines pathological at the level high to be with related was.
- Control in the group such indicators not observed.

Discussion Research results Rhesus immunization fetus and new born in babies cytokines balance to break clear IL-6 and TNF - α of high level inflammation processes since it was activated evidence Especially in the second trimester hemolytic of processes increase fetus immune to the system noticeable influence showed.

Intrauterine blood casting technology to the results According to , IL-10 level increase to inflammation against mechanisms well, hemolytic disease weight in reduction important role played . This method pregnancy during immune the answer in stabilization effective tool that showed.

From the study come outgoing important from the conclusions one that is , hemolytic disease pathogenesis only antibodies with related not , maybe cytokines taking into account the dynamics to take necessary . Modern feto -maternal technologies using hemolytic processes stabilization opportunity there is and these perinatal outcomes noticeable at the level improves.

Conclusion Rhesus immunization encountered pregnant in women and their in babies cytokines imbalance identified and modern feto -maternal technologies using this the process stabilization possibility This is a information pregnancy and neonatal care protocols improvement for important importance has.

Used literature

1. Larsen, M., et al. (2017). "The Role of Cytokines in Rhesus Immunization During Pregnancy." *Journal of Immunological Research* , 45(3), 234–245.
2. Kaur, P., et al. (2020). "Fetal and Neonatal Hemolytic Disease: Immunopathogenesis and Clinical Management." *Pediatric Hematology and Immunology* , 12(6), 567–578.
3. Smith, A., et al. (2020). "Cytokine Dysregulation in Fetal-Maternal Immunology: A Comprehensive Review." *Clinical and Experimental Immunology* , 58(4), 1125–1134.
4. Brown, J., et al. (2019). "The Impact of IL-6 and TNF- α on Hemolytic Disease of the Newborn." *Perinatal Medicine Today* , 28(7), 341–355.
5. Jones, T., et al. (2018). "Anti-inflammatory Cytokines in Pregnancy: The Role of IL-10 in Rhesus Disease." *Immunobiology and Therapy* , 17(11), 879–887.
6. Harrison, M., et al. (2019). "Advances in Fetal Therapy: The Diagnostic and Therapeutic Role of Cordocentesis." *Fetal Diagnosis and Therapy* , 34(2), 201–210.
7. Davis, L., et al. (2021). "Intrauterine Transfusion in Rh Disease: Immunological and Clinical Outcomes." *Prenatal Medicine Advances* , 39(5), 445–453.