# Evaluation of IgG subclass deficiency in patient with recurrent spontaneous abortion

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## Short Communication

## Abstract

Unexplained Recurrent Spontaneous Abortion (URSA) is loss of three or more pregnancies prior to the 20th week of gestation with or without previous live births, occurring in 1- 2% of human pregnancies. Several established risk factors, including genetic and placental anomalies, endocrinological dysfunction, infection, uterine anatomical malformations and hemostatic disorders contribute in RSA. Also immunologic factors have been proposed in unexplained RSA. Evidence has indicated that cytokine pattern, auto immune and alloimmune factors and other immunologic factors have important role in URSA. Since the IgG is the only immunoglobulin class that is significantly transferred across the human placental barrier and it can cross from the mother to foetus, we evaluated it and their subclasses in this research in patient with recurrent spontaneous abortion. In this case control study, we included 176 women with a history of three or more sequential early abortions with mean age of 31.02±6.64 years who referred to Sarem Women's Hospital, Tehran, Iran, between July 05, 2018 and December 30, 2018. Excluded from the study were patients with chromosomal abnormality, genetic disorders, infection (HBV, HSV, HCV, EBV, HIV and TORCH syndrome), autoimmune disease (presence of anti-cardiolipin antibodies, antinuclear antibodies, and anti-phospholipid antibodies), anatomical anomalies, uterine malformations, cervical incompetence, endocrinal abnormalities, and diabetes. As for the control group, we enrolled 139 non-pregnant healthy women with at least one successful pregnancy and no previous disease and a mean age of 32.51±6.044 years. Blood samples were taken from case and control groups at the implantation window during the luteal phase (at days 19-23 of the menstrual cycle) and sera were stored at -70 °C until detection of IgG and IgG subclass Levels. We evaluated blood IgG and IgG subclasses by nephelometry method and statistical analysis was performed using SPSS version 22. Among the patients, 18 women showed IgG subclass deficiency. Of these patients 17 women showed IgG3, 10 patient IgG1, eight IgG4 and five IgG2 deficiency. IgG subclasses in healthy control people's fell in normal range. Showing evidence of IgG subclasses deficiency may help identify RSA patients with immunologic causes who can benefit from iv. immunoglobulin and other immunologic treatments.

## Biography

Ahad Zare is the current residing Assistant Professor of Immunology at the Faculty of Medicine, Islamic Azad University, Tehran ,Iran. He has successfully published several papers related to the area of Allergy Vaccine, Animal Models of Allergy and Reproductive Immunology.

Note:- This work is partly presented at webinar on Women Health and Child Care (March 26, 2021).