# P-51 Effectiveness of Intravenous Immunoglobulin Therapy in Women with Recurrent Spontaneous Abortions with Elevated Pre-conceptional Peripheral Blood $CD56^+$ Natural Killer Cell Percentage

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**Background & Objectives:** Recurrent spontaneous abortion (RSA) occurs in 1~2% of the child bearing population. In the vast majority of cases, the etiology of RSA is unknown and several hypotheses have been made on the basis of available of data. Several studies have been reported that women with RSA manifest an abnormal cellular immune response with marked increase in peripheral blood NK cells with $CD56^+$. Intravenous gamma immunoglobulin (IVIg) infusion is largely used as an effective means for treatment of some immune-related disease. And, some authors reported that elevated peripheral blood natural killer cells are effectively down regulated by IVIg infusion in women with RSA. The aim of the present study was to evaluate the effectiveness of Low-Dose Intravenous Immunoglobulin (IVIg) therapy in women with Recurrent Spontaneous Abortions (RSA) with elevated pre-conceptional peripheral blood $CD56^+$ Natural Killer (NK) cell percentage.

**Method:** Seventy-three women with RSA and elevated pre-conceptional peripheral blood $CD56^+$ NK cell percentage who had received low-dose IVIg therapy (400 mg/Kg for a day, every 4 weeks, until 20 gestational weeks), included in study. Controls were sixteen women with RSA and elevated pre-conceptional peripheral blood $CD56^+$ Natural Killer (NK) cell percentage who had not received IVIG therapy. In this study, associated with aneuploidy by karyotype analysis and evidence of genetic, endocrine, infections or anatomic factors were excluded and we retrospectively analyzed the pregnancy outcomes and compare the results between study and control groups. Successful pregnancy outcome was defined as pregnancy ongoing beyond 25 gestational weeks.

**Results:** Age, number of previous abortions, pre-conceptional $CD56^+$ NK cell percentage and auto-antibody positive rate were not statistically different between two groups. Otherwise, sixty-two women who received IVIg therapy (62/73, 84.9%) but, only six women who had not received (6/16, 37.5%), had a successful pregnancy outcome and the success rate difference between two groups was statistically significant (chi-square, $p<0.05$).

**Conclusions :** Based on our study, low-dose IVIg therapy have a role in treatment of RSA patients with elevated pre-conceptional peripheral blood $CD56^+$ Natural Killer (NK) cell percentage, but more lager scaled prospective study is needed for available of conclusive evidence.