

INTRODUCTION

IgG4-related disease (IgG4-RD) links multiple fibro-inflammatory disorders. IgG4-RD is characterized by a typical biopsy, increased level of circulating plasmablasts and often elevated serum IgG4. Plasmablasts are early plasma cells, which disappear shortly following activation in healthy people and by steroids. Their sustained presence in IgG4-RD suggests the existence of a constant trigger like galactin-3. As IgG4-RD mimics other disorders, **biomarkers for the disease are required.**

METHOD

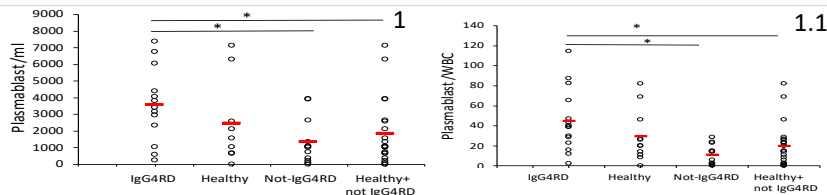
Patients: Healthy people (12), patients suspected of having IgG4-RD (26)
Flow cytometry –used for evaluating %CD19-B cells, plasmablasts (CD19+CD20-CD38+CD27), %lymphocytes (CD45), plasmablasts-number /100,000WBC, plasmablasts-number/ml and plasmablasts-number/CD19.
Elisa-used for evaluating galactin-3 level
Correlation tests - were done between serum IgG4, IgG, plasmablasts and galactin-3

OBJECTIVES

To find an additional diagnostic tool for IgG4-RD patients

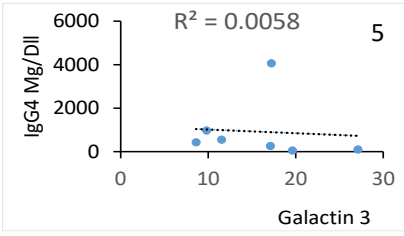
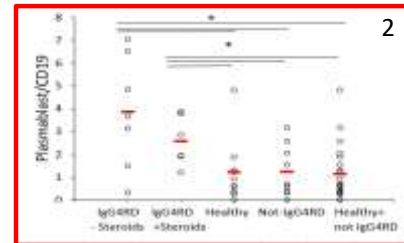
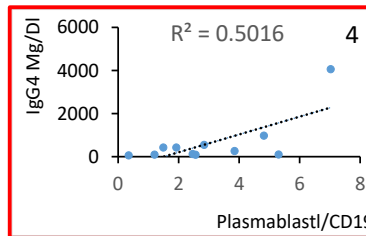
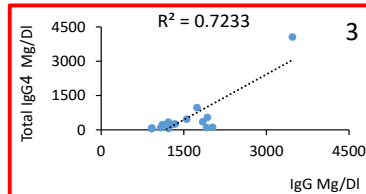
RESULTS

- Patients with typical biopsies and high plasmablasts were defined as IgG4-RD (n=14). Seven of them took steroids.
- Plasmablasts-number (/ml, /WBC) distinguished between IgG4-RD and non-IgG4-RD patients, but not between IgG4-RD and healthy people (Figure 1,1.1).
- %CD19 was lower in IgG4-RD patients compared with other groups (Table 1).
- **The only parameter that distinguished between steroid treated/untreated IgG4-RD patients to all groups was plasmablasts/CD19+cells (Figure 2).**
- IgG4 level was higher in IgG4-RD patients than in non-IgG4-RD (506±252 vs 32±16.8 (p=0.07) and positively correlated with the levels of total-IgG (Fig. 3) and plasmablasts/CD19 (Fig.4), but not with galactin-3 level (Fig 5).



Index: IgG4RD-steroids (IgG4RD patients not treated with steroids) **Healthy:** Healthy people
IgG4RD+steroids (IgG4RD patients treated with steroids) **Healthy + not IgG4RD-** all people who do not have IgG4RD
Not IgG4RD- People suspected of having IgG4RD and were found to be negative. * - p<0.05

%CD19		Table 1	
IgG4RD	Healthy	not IgG4RD	Healthy+not IgG4RD
6.3±0.9*	10±1.2	11±1.7	10.3±1



CONCLUSIONS

- The parameter that best distinguished IgG4-RD patients (steroids-treated/not-treated) from others was Plasmablasts/CD19+cells.
- The increased Plasmablasts/CD19 level in steroid treated patients suggest that plasmablasts differentiation continues to be high in their body.
- Our results do not point to galactin 3 as the trigger for plasmablasts/IgG4 production.