The *FcGR2A* (A>G) (rs1801274) genetic variant and the efficacy of tocilizumab in rheumatoid arthritis patients

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BACKGROUND AND OBJECTIVE

The engagement of FcGRs by TNF antagonists could affect to macrophage-mediated clearance of immune-complexes. The aim of our study was to explore the potential role of *FcGR2A* genetic polymorphism as a predictor of tocilizumab efficacy in rheumatoid arthritis (RA) patients.

MATERIAL AND METHODS

The *FcGR2A* (A>G) (rs1801274) genetic variant was genotyped using predesigned TaqMan® genotyping assays technology and analyzed on a ViiA7® Real-time PCR system. Clinical response was evaluated at 24 weeks with the use of the 28-joint disease activity score criteria (DAS28). The end-point was a change in DAS28 (cDAS28). The statistical analysis was performed using SPSS v.20.

RESULTS

	N=140 n (%) or mean (±sd)
Women	111 (79%)
Age	53.25 (±12.42)
DAS (Baseline)	5.71 (±1.13)

	cDAS	NON-cDAS	O.R (95% C.I.)	P-value
FcGR2A-AA	8	31	0,14 (0.02-0.81)	0,01
non-FcGR2A-AA	4	104		
FcGR2A-AG	2	71	9,52 (1,80-14,70)	0,07
non-FcGR2A-AG	10	64		

CONCLUSION

Our results confirm that FcGR2A (A>G) rs1801274 polymorphisms could be useful as a genetic marker of tocilizumab efficacy in RA patients. More studies are necessary to confirm these results.