



EFFECTS OF IL-1 β RECEPTOR ANTAGONIST IN KIDNEY TRANSPLANT RECIPIENTS



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INTRODUCTION AND AIMS

Familial Mediterranean fever (FMF) is an autosomal recessive disease characterized by recurrent attacks of fever and serositis, frequently seen in Turkish population. Amyloidosis is the most significant complication of FMF leading to end stage renal disease (ESRD). The aim of this study was to investigate long-term efficacy and safety profile of Anakinra in kidney transplant recipients with secondary amyloidosis due to FMF.

METHODS

A total of 22 patients (13/22 (59%) men, mean age 39 \pm 9 years) who underwent kidney transplantation for ESRD related to AA amyloidosis nephropathy between 2006 and 2015 were included. Anakinra was started at a dose of 100 mg/day subcutaneously, because of colchicine-resistant serositis attacks. Patients were on clinical follow up for post-transplant 40 \pm 17 months. We investigated the change in serum creatinine, proteinuria levels, estimated glomerular filtration rate which calculated by CKD-EPI, and the efficacy and safety profile of Anakinra. Efficacy was assessed by decrease in number of attacks and acute phase reactants. Safety profile was evaluated using the common toxicity criteria.

RESULTS

	Patients under Colchicine treatment (n:22)	Patients under Anakinra treatment (n:22)	p Value
Serositis Attacks (attacks per year)	16 \pm 11	3 \pm 3	<0.001
Renal Function			
Serum Creatinine (mg/dl)	1.69 \pm 1.72	1.47 \pm 0.82	0.538
eGFR (ml/min/1.73m ²)	56.9 \pm 26.2	70.8 \pm 46.7	0.748
Proteinuria (g/day)	0.78 \pm 1.07	0.76 \pm 1.50	0.934
Acute Phase Reactants			
ESR (mm/h)	49 \pm 30	10 \pm 10	<0.001
CRP (mg/L)	35 \pm 26	5 \pm 4	<0.001

Abbreviations: eGFR: estimated glomerular filtration rate, ESR: erythrocyte sedimentation rate, CRP: C-reactive protein

Serum creatinine [1.69 \pm 1.72 to 1.47 \pm 0.82 mg/dL (p= 0.538)] and daily proteinuria [0.78 \pm 1.07 to 0.76 \pm 1.50 mg/dL (p= 0.934)] levels remained stable during the follow up. Only two patients suffered from graft loss during follow-up due to biopsy proven chronic antibody mediated rejection. The number of serositis attacks per year were decreased under Anakinra treatment [16 \pm 11 to 2.9 \pm 3.1, respectively (p<0.001)]. Erythrocyte sedimentation rate and C-reactive protein levels significantly decreased under Anakinra treatment [49 \pm 30 to 10 \pm 10 mm/h (p<0.001), 35 \pm 26 to 5 \pm 4 mg/L (p<0.001)]. Only one patient had mild liver enzyme elevation and three patients had transient leucopenia during the follow up.

CONCLUSION

All of the patients responded to Anakinra regarding the disappearance of symptoms and normalization of acute-phase reactant levels. IL-1 β receptor antagonists showed favorable outcome in FMF renal transplant recipients.

REFERENCES

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