THE STUDY OF IFN-γ POLYMORPHISM AND CLINICAL FEATURE,PATHOLOGY TYPE AND PROGNOSIS OF IGA NEPHROPATHY IN INNER MONGOLIA OF HAN NATIONALITY

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INTRODUCTION AND OBJECTIVES:

IgA nephropathy (primary IgA nephropathy, IgAN) is the highest rates of primary glomerular disease in china and one of the leading causes of chronic renal failure, especially for adolescent patients. In recent years, the reports that IgA nephropathy is associate with gene polymorphism are growing which prove that the IgA nephropathy may be a polygenic disease. The Interferon is the important cytokines involved in the immune inflammatory reaction. There are a lot of researches about the relation in interferon and renal function but so far it has not been determined, and there are few reports about interferon genes and kidney disease, especially in IgA nephropathy patients. So the objective is to study the relationship between the single nucleotide polymorphism (SNP) in IFN-γ+874 and clinical feature, pathological type and prognosis in patients with IgA nephropathy.

METHODS:

Extract DNA from IgA nephropathy patients and normal controls. The SNP in IFNγ+874 gene was determined by special sequence primer of polymerase chain reaction (PCR-SSP) . Forty-one of the patients had been followed up for 1~60 months. IFNγ+874 gene type and allele frequency were compared between patients with IgA Nephropathy and normal controls. In addition, the associations of IFNγ+874 polymorphism and clinical feature, pathological type and prognosis were analyzed in patients with IgA nephropathy.

RESULTS:

(1)The significant differences of gene type and allele distribution have been found between the patients with IgA nephropathy and healthy controls: The proportion of AA-gene type and A-allele are remarkably higher in IgA nephropathy;

(2)The patients with IgA nephropathy have significantly different blood pressure and 24h-Urine protein of onset in different gene types: The patients with TT-gene type have lower blood pressure while The patients with AA-gene type have more 24h-Urine protein;

(3)NO significant difference of gene type distribution in IFN-γ+874 has been found between the patients with different pathological types;

(4)The patients of TT-gene type have significant difference in renal function decreasing time.

CONCLUSIONS:

(1)The SNP in IFNγ+874 may be the predisposing factor for IgA nephropathy and may influence the blood pressure and 24h-Urine protein;

(2)The SNP in IFN-γ+874 has no correlation with pathological type in IgA nephropathy;

(3)The SNP in IFNγ+874 is probably the influencing factor for the progress and prognosis of IgA nephropathy.

The gene type and allele distribution

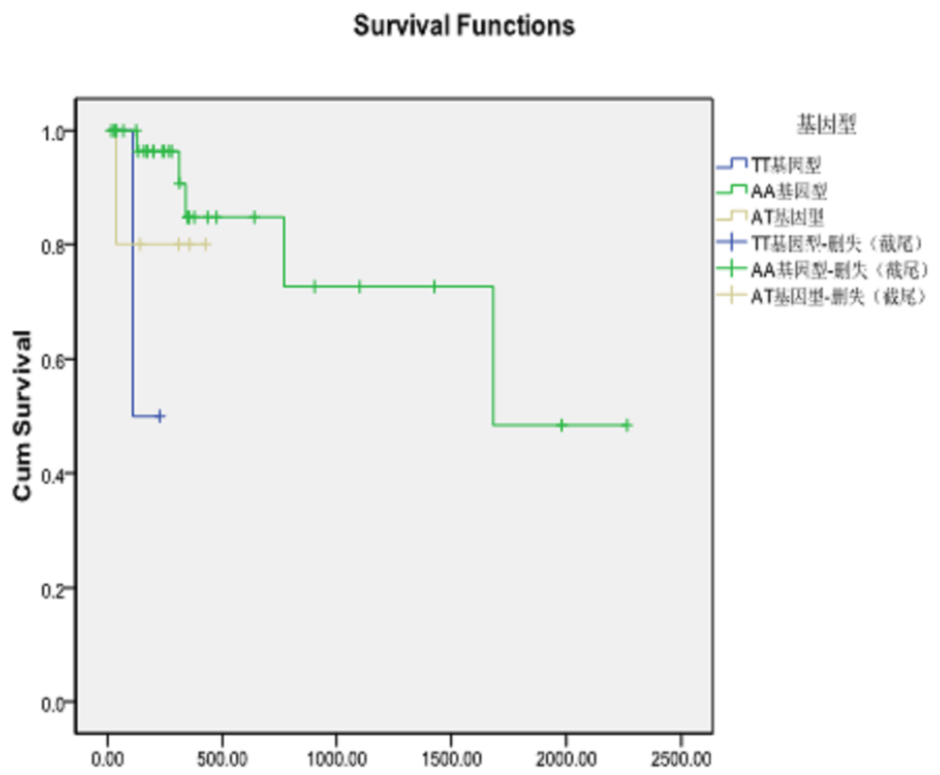
Group	Num	Gene Type		Allele	
		TT+AT	AA	T	A
IgAN	131	26 (0.198)	105 (0.802)*	30 (0.115)	232 (0.885)*
Controls	138	46 (0.333)	92 (0.667)	52 (0.188)	224(0.812)

*$P<0.05$

The blood pressure and the 24h-Urine protein in different gene types

Clinical Data	Gene Type		
	TT(n=4)	AA(n=105)	AT(n=22)
Systolic pressure (mmHg)	100.0±0.0*	123.5±16.9	128.8±24.1
Diastolic pressure (mmHg)	65.0±7.1*	80.7±10.1	85.2±18.1
24h-Urine protein(g/24h)	2.17±1.76	3.12±3.12 *	1.54±0.94

*$P<0.05$



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