

Distribution of glomerular deposits of IgG subclasses in paraffin embedded renal biopsy specimens of Lupus Nephritis and Idiopathic Membranous Nephropathy

Eiichi Sato^{1,2} Tsukasa Nakamura^{2,1} Mayuko Amaha² Mayumi Nomura² Daisuke Matsumura²
Akiko Fujii¹ Yuko Ono¹ Yoshihiko Ueda¹

Dokkyo Medical University, Koshigaya Hospital, Department of Pathology¹
Shinmatsudo Central General Hospital, Division of Nephrology, Department of Internal Medicine²

Objectives:

We have previously reported at the 55th annual meeting of Japanese Society of Nephrology that IgG subclass analysis is useful in diagnosing idiopathic and secondary membranous nephropathy (Class V SLE nephritis).

In particular, we discussed the possibility of diagnosis by enzyme immunoassay using biopsy specimens.

Because our study sample size is small we have narrowed our focus to the diagnosis of idiopathic membranous nephropathy and Class IV and V SLE nephritis in subjects with detailed medical histories and in which IgG subclass analysis had not yet been performed.

Methods:

67 cases diagnosed as membranous nephropathy by renal biopsy (1998-2012)

Number of cases
Enzyme immunoassay Unlabeled antibody

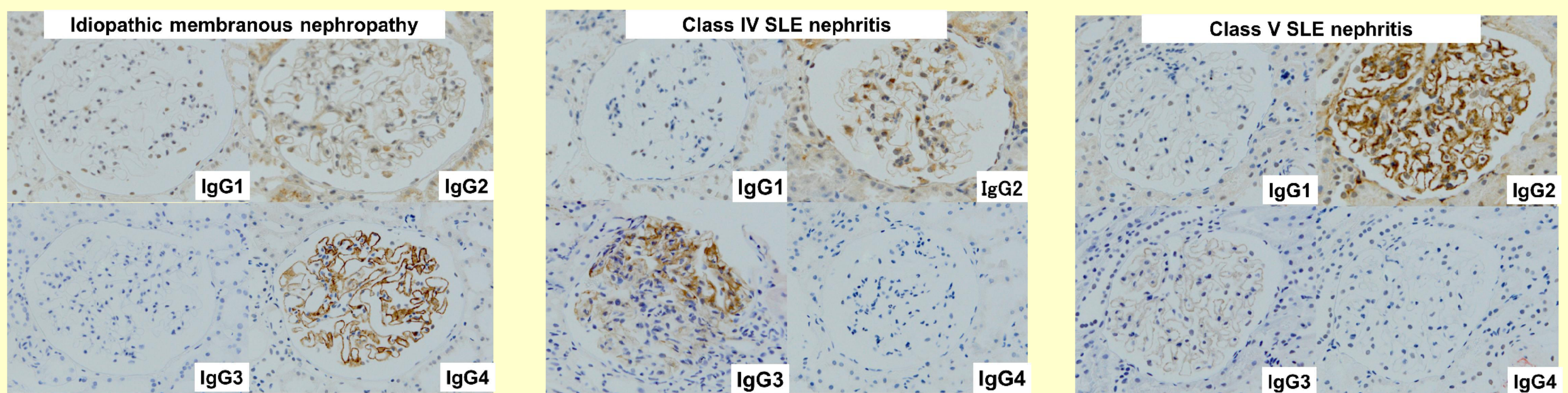
Diagnosis	Number of cases
Idiopathic membranous nephropathy (Stage II, III)	33
SLE nephritis	34
Class IV	17
Class V	6
Class IV+V	11

We applied the following scores for positive findings

(-) : 0 (+) : 1 (++) : 2

We used the Mann-Whitney U test to statistically analyze the 2 groups.

Results:

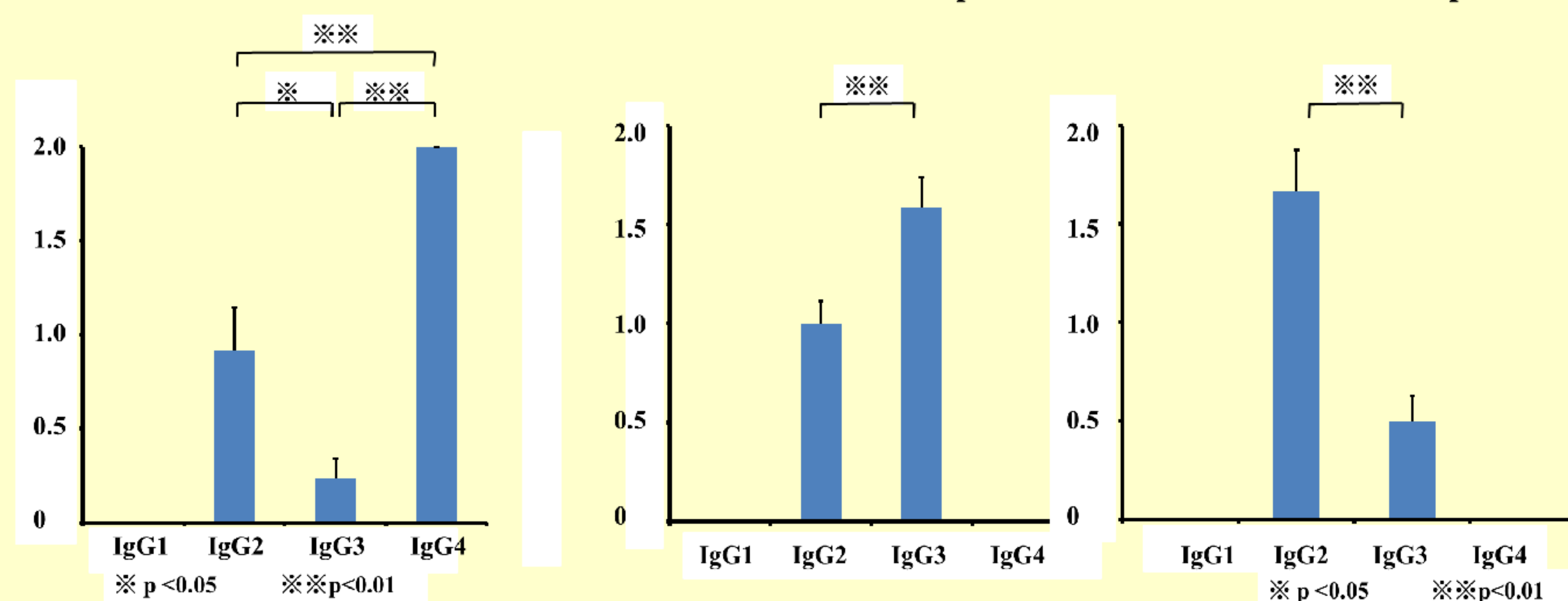


Idiopathic membranous nephropathy

Class IV SLE nephritis

Class V SLE nephritis

Summary of results



	IgG1	IgG2	IgG3	IgG4
Idiopathic membranous nephropathy				⊙
Class IV SLE nephritis		○	⊙	
Class V SLE nephritis		⊙	○	

Conclusions:

1. We analyzed IgG subclasses in membranous nephropathy biopsies by enzyme immunoassay.
2. We report increased IgG4 deposits in idiopathic membranous nephropathy samples. IgG2 deposits were <IgG3 in Class IV SLE nephritis and IgG2 deposits >IgG3 in Class V SLE nephritis.
3. IgG subclass analysis of renal biopsies with unlabeled antibodies may be useful in the diagnoses of idiopathic membranous nephropathy and Class IV and V SLE nephritis.