Supplemental materials

Title: Secondary IgA Nephropathy Shares the Same Immune Features with Primary IgA Nephropathy

Authors: Manliu Wang, Jicheng Lv, Xue Zhang, Pei Chen, Minghui Zhao, Hong Zhang

List

Table S1. Various kinds of glomerulonephritis patients

Figure S1. Plasma immunoglobulin A1 (IgA1), galactose-deficient IgA1 (Gd-IgA1) and adjusted galactose-deficient IgA1 (AD-Gd-IgA1) levels in sub-groups of enrolled patients and healthy volunteers. (a) Plasma total IgA1; (b) plasma Gd-IgA1; (c) plasma Ad-Gd-IgA1. U/ml, unit/ml. GN, glomerulonephritis cases; LN, lupus nephritis cases; HC, healthy controls; IgAN, IgA nephropathy cases; Cirrhosis, cirrhosis combined with IgAN cases; RA, rheumatoid arthritis combined with IgAN cases; AS, ankylosing spondylitis combined with IgAN cases; SS, Sjögren's syndrome combined with IgAN cases; Psoriasis, psoriasis combined with IgAN cases; UC, ulcerative colitis combined with IgAN cases; Neoplasia, neoplasia combined with IgAN cases; Infections, infections combined with IgAN cases; COB, chronic obstructive bronchiolitis combined with IgAN cases; PF, pulmonary fibrosis combined with IgAN cases.

Figure S2. Detection of circulating IgA/IgG immune complex (IgA/IgG-IC) in sub-groups of

enrolled patients and healthy volunteers. (a) IgA1-IgG complex; (b) IgA-IgG complex. U/ml, unit/ml. GN, glomerulonephritis cases; LN, lupus nephritis cases; HC, healthy controls; IgAN, IgA nephropathy cases; Cirrhosis, cirrhosis combined with IgAN cases; RA, rheumatoid arthritis combined with IgAN cases; AS, ankylosing spondylitis combined with IgAN cases; SS, Sjögren's syndrome combined with IgAN cases; Psoriasis, psoriasis combined with IgAN cases; UC, ulcerative colitis combined with IgAN cases; Neoplasia, neoplasia combined with IgAN cases; Infections, infections combined with IgAN cases; COB, chronic obstructive bronchiolitis combined with IgAN cases; PF, pulmonary fibrosis combined with IgAN cases.

Figure S3. Glomerular deposition of galactose-deficient IgA1 in patients with IgA nephropathy (IgAN) combined cirrhosis. Double staining with anti-Gd-IgA1 mAb (Red) and anti-IgA1 mAb (Green). Merged figures were also added to the DAPI channel. (Bars = $50 \mu m$).

Table S1 \mid Various kinds of glomerulonephritis patients

Types of glomerular diseases	Patients (n)
Membranous Nephropathy	5
Minimal Change Disease	6
Antineutrophil cytoplasm Antibody-associated Vasculitis	4
Crescentic Glomerulonephritis	3
Focal Segmental Glomerular Sclerosis	5
Membranoproliferative Glomerulonephritis	2
Total	25

Figure S1. Plasma immunoglobulin A1 (IgA1), galactose-deficient IgA1 (Gd-IgA1) and adjusted galactose-deficient IgA1 (AD-Gd-IgA1) levels in sub-groups of enrolled patients and healthy volunteers. (a) Plasma total IgA1; (b) plasma Gd-IgA1; (c) plasma Ad-Gd-IgA1. U/ml, unit/ml. GN, glomerulonephritis cases; LN, lupus nephritis cases; HC, healthy controls; IgAN, IgA nephropathy cases; Cirrhosis, cirrhosis combined with IgAN cases; RA, rheumatoid arthritis combined with IgAN cases; AS, ankylosing spondylitis combined with IgAN cases; SS, Sjögren's syndrome combined with IgAN cases; Psoriasis, psoriasis combined with IgAN cases; UC, ulcerative colitis combined with IgAN cases; Neoplasia, neoplasia combined with IgAN cases; Infections, infections combined with IgAN cases; COB, chronic obstructive bronchiolitis combined with IgAN cases; PF, pulmonary fibrosis combined with IgAN cases.

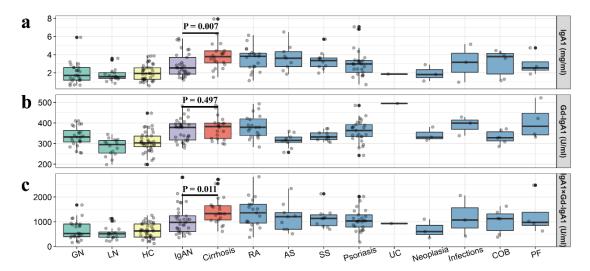


Figure S2. Detection of circulating IgA/IgG immune complex (IgA/IgG-IC) in sub-groups of enrolled patients and healthy volunteers. (a) IgA1-IgG complex; (b) IgA-IgG complex. U/ml, unit/ml. GN, glomerulonephritis cases; LN, lupus nephritis cases; HC, healthy controls; IgAN, IgA nephropathy cases; Cirrhosis, cirrhosis combined with IgAN cases; RA, rheumatoid arthritis combined with IgAN cases; AS, ankylosing spondylitis combined with IgAN cases; SS, Sjögren's syndrome combined with IgAN cases; Psoriasis, psoriasis combined with IgAN cases; UC, ulcerative colitis combined with IgAN cases; Neoplasia, neoplasia combined with IgAN cases; Infections, infections combined with IgAN cases; COB, chronic obstructive bronchiolitis combined with IgAN cases; PF, pulmonary fibrosis combined with IgAN cases.

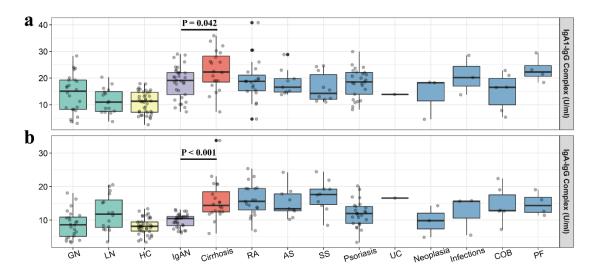


Figure S3. Glomerular deposition of galactose-deficient IgA1 in patients with IgA nephropathy (IgAN) combined cirrhosis. Double staining with anti-Gd-IgA1 mAb (Red) and anti-IgA1 mAb (Green). Merged figures were also added to the DAPI channel. (Bars = $50 \mu m$).

