Elevated Salivary IgA in Patients with IgA Nephropathy

H.		Yamabe
K.		Ozawa
K.		Fukushi
H.		Ohsawa
N.		Chiba
K.		Onodera

2nd Department of Internal Medicine, Hirosaki University School of Medicine, Hirosaki, Japan

H. Yamabe, 2nd Department of Internal Medicine, Hirosaki University School of Medicine, Hirosaki 036 (Japan)

Dear Sir,

Secretory IgA, which exists in mucosal surfaces of respiratory and digestive tracts, provides the primary defense mechanism against some local infections owing to its abundance in saliva, tears, bronchial secretions and mucous secretions of the small intestine [1]. It is well known that many patients with IgA nephropathy show deteriorated urinary findings when they have an upper respiratory tract infection. But there has been little interest in secretory IgA because it was not detected in the glomeruli [2, 3]. We examined salivary IgA to elucidate the significance of secretory IgA in IgA nephropathy patients.

Saliva was obtained without any stimulus from 21 patients with IgA nephropathy and 16 normal controls. Salivary IgA and serum IgA were measured simultaneously by single radial immunodiffusion.

The mean levels of salivary IgA and serum IgA were 24.1 ± 10.4 and 266.9 ± 100.9 mg/dl in the controls, 40.0 ± 16.1 and 414.6 ± 98.1 mg/dl in the patients. The levels of salivary IgA and serum IgA were significantly higher in the patients than in the controls ($p < 0.001$). There was a positive correlation between salivary IgA and serum IgA ($r = 0.44$, $p < 0.01$; fig. 1).

All salivary IgA is secretory IgA. Secretory IgA is different from serum IgA in its origin, molecular weight and immunological property. It is widely recognized that the patients with IgA nephropathy often have elevated serum IgA, the causes of which remain unexplained. The reason of elevated salivary IgA is also unknown. Bene et al. [4] reported an imbalance in the IgA-producing system of patients with IgA nephropathy. They mentioned that the number of tonsillar IgA-secreting cells was higher than that of IgG-secreting cells in the patients, while the opposite was observed in the controls. Elevated salivary IgA may be caused by the change of the IgA-secreting system in IgA nephropathy.

Fig. 1. Salivary IgA in patients with IgA nephropathy.

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