学位論文審査結果の要旨

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（学位論文審査結果の要旨）

Intrarenal renin–angiotensin system activation and macrophage infiltrations in pediatric chronic glomerulonephritis

【主論文審査結果の要旨】

著者らは論文において下記の内容を述べている。

Background: The current study tested the hypothesis that urinary angiotensinogen (UAGT) and urinary monocyte chemoattractant protein-1 (UMCP-1) levels provide a specific index of intrarenal renin-angiotensin system (RAS) status and the degree of infiltration of macrophages associated with RAS blockade and immunosuppressant treatment in pediatric patients with chronic glomerulonephritis.

Methods: We measured baseline UAGT and UMCP-1 levels to examine the correlation between glomerular injury in 48 pediatric chronic glomerulonephritis patients before treatment. Furthermore, we performed immunohistochemical analysis of angiotensinogen (AGT) and CD68 in 27 pediatric chronic glomerulonephritis patients treated with RAS blockades and immunosuppressants for 2 years. Finally, we examined the effects of angiotensin II (Ang II) on monocyte chemoattractant protein-1 (MCP-1) expression in cultured human mesangial cells (MCs).

Results: Baseline UAGT and UMCP-1 levels positively correlated with urinary protein levels, scores for mesangial hypercellularity, rate of crescentic formation, and expression levels of AGT and CD68 in renal tissues ($p < 0.05$). UAGT and UMCP-1 levels were significantly decreased after RAS blockade and immunosuppressant treatment ($p < 0.01$), which was accompanied by AGT and CD68 ($p < 0.01$), as well as the magnitude of glomerular injury. Cultured human

MCs showed increased MCP-1 messenger ribonucleic acid and protein levels after Ang II treatment ($p < 0.01$).
Conclusions: The data indicates that UAGT and UMCP-1 are useful biomarkers of the degree of glomerular injury during RAS blockade and immunosuppressant treatment in pediatric patients with chronic glomerulonephritis.

本論文は小児慢性糸球体腎炎症例の臨床検体を用いて、レニンアンジオテンシン系の活性化とマクロファージの糸球体への浸潤について検討した。尿中アンジオテンシノーゲンと尿中 monocyte chemoattractant protein-1 が高値であると、それらに相関してメザンギウム細胞増多や半月板形成の病理所見が進んだ。尿中バイオマーカーを測定することで腎病理所見を推測できる可能性を示した論文であり、学術上極めて有益で、学位論文として価値あるものと認めた。

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