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Metabolomics based biomarkers as clinical outcome indicator in Minimal change diseases

Young Wook Choi¹, Jung Nam An¹, Jin Seoung Hyeon¹, Jin Hyuk Kim¹, Seung Hee Yang⁴, Sang-Ho Lee², Jang-Hee Cho³, Dong Ki Kim⁴, Geum-Sook Hwang⁵, Jung Pyo Lee³
¹Department of Internal Medicine-Nephrology, SMG-SNU Boramae Medical Center, Korea, Republic of
²Department of Internal Medicine-Nephrology, Kyung Hee University School of Medicine, Korea, Republic of
³Department of Internal Medicine-Nephrology, Kyungpook National University School of Medicine, Korea, Republic of
⁴Department of Internal Medicine-Nephrology, Seoul National University College of Medicine, Korea, Republic of
⁵Department of Western Seoul Center, Korea Basic Science Institute, Korea, Republic of

Objectives: Minimal change disease (MCD) is well known as one of the glomerulonephritis (GN) that recur frequently. We investigated the clinical outcome of Metabolomics based biomarkers in patients with MCD.

Methods: Urine samples from healthy control (n=61), primary MCD (n=81) and MCD follow up (n=35) were analyzed with NMR-spectroscopy. Metabolites were then quantified and compared between groups.

Results: In the urine samples, metabolites that showed a clear difference between the healthy control group and the MCD group were analyzed. In addition, when these metabolites level were completely remission in the MCD follow up group, they were restored to the healthy control group level.

Conclusions: In this study, we suggest that metabolites biomarker is a reliable tool for the prediction of MCD prognosis and guidance of therapeutic plans.