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The Link Between the Altered gut Microbiota and Chronic Spontaneous Urticaria

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Background: *Nowadays, regulation of the immune system through gut microbiota is supposed to affect the chronic spontaneous urticaria. Unfortunately, the whole intestinal microbiome in chronic spontaneous urticaria patients is rarely being clarified. Lactobacillus in the prevention and treatment of the allergic and inflammatory diseases was reported.*
Objectives: *The gut microbiota may be a target for improving outcomes in subjects affected or at risk for chronic spontaneous urticaria.*
Materials and methods: The evaluation of the patients was based on history and physical examination. Specific bacterial genera including Lactobacillus and Bacteroides as well as their microbial metabolites, i.e., short-chain fatty acids, confer protection against chronic spontaneous urticaria.
Results: *Chronic spontaneous urticaria is a spontaneous disorder defined as persistent urticaria longer than 6 weeks in duration and without an identifiable cause. Imbalanced microbiota diversity should be considered as one of the most important underlying causes of chronic spontaneous urticaria. Although the mechanism of decreased microbiota diversity associated with the etiology of chronic spontaneous urticaria is not clear, alterations in gut bacterial diversity could disrupt mucosal immunological tolerance by promoting regulatory T cells reacting to dietary antigens.*
Conclusion: *This is the first study, to our knowledge, to show the change of microbiota composition in patients with chronic spontaneous urticaria. Our results demonstrated that the microbial composition was significantly different between patients with chronic spontaneous urticaria and the healthy individual, which may be the reason leading to the various outcomes of probiotic treatment. This study suggests that disturbances in the gut microbiome composition and metabolites and their crosstalk or interaction may participate in the pathogenesis of chronic spontaneous urticaria.*

Key words: microbiome, chronic spontaneous urticaria, probiotics

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The pathogenesis of chronic urticaria is closely related to imbalances in immunity. Regulation of the immune system is one of the important roles of the gut microbiota. Nowadays, regulation of the immune system through gut microbiota is supposed to affect the chronic urticaria. Therefore, gut microbiota plays an important role in the evolution and regulation of the immune system. Cumulative evidence has demonstrated an intimate, bidirectional connection between the gut and skin. Gastrointestinal disorders are often