

## Allergic patient management using smartphone

<sup>1</sup>Division of Allergy and Clinical Immunology, Department of Internal Medicine, Seoul National University Bundang Hospital, Seoul National University College of Medicine, <sup>2</sup>Institute of Allergy and Clinical Immunology, Seoul National University Medical Research Center, Seoul National University College of Medicine, <sup>3</sup>Gyeonggi-Do Atopy · Asthma Education Information Center, Korea

**Yoon–Seok Chang**

Smartphones are everywhere. You bring it almost everywhere in your life. Can we manage diseases using smartphones? Nowadays it became quite popular to use smartphone applications for healthcare, e.g. weight control, diet, diabetes mellitus, and so on. What about in allergic diseases? Allergic diseases such as asthma, allergic rhinitis, and atopic dermatitis are very common chronic diseases and cost high socioeconomic burden, which needs special attention. Importantly their symptoms can be exacerbated suddenly by triggering factors. Food allergy, drug allergy, and anaphylaxis can be also induced suddenly by causative agents. Sometimes asthma, laryngeal edema, and anaphylaxis could be life-threatening. Now we have smartphones which can provide very nice measures to control allergic diseases and to prevent the exacerbations. Here I would like to share the experience of managing asthma patients using a smartphone application which provided interactive, real-time action plans according to symptoms and peak flow rate and even provided emergency contact to medical team if necessary. The feasibility tests showed that the application was useful, easy to use, and good for the adherence. Next project was to provide educational materials on allergic diseases and tools for self-measuring the severity of asthma, allergic rhinitis, and atopic dermatitis through a smartphone application, which was quite successful. Now our team is on another application to prevent food allergy at school, which is another very important subject.