Inability of Medical Students to Use of Three Types of Inhaler
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Background: Several studies have demonstrated that a significant percentage of health care professionals are deficient in both knowledge and skill regarding the inhalers. But no data is available about the assessment of inhaler technique and knowledge among medical students in Korea. The aim of this study was to evaluate the proficiency and knowledge of medical students in proper use of 3 kinds of inhalers (metered dose inhaler, turbuhaler, and diskus).

Methods: We enrolled 40 third-year medical students who are on hospital training course. The participants received 25 to 35 minutes of instruction from a trained nurse educator for asthma. Three month later, we assessed their knowledge and skill regarding inhaler use. They were asked to discriminate each type of 3 devices and to demonstrate the use of each device using placebo inhalers. Also, they were asked about the prevention and management for local adverse reaction induced by inhaled corticosteroids (ICS). Participants’s inhaler skill was assessed into 3 levels as good, inadequate, and poor for each device type.

Results: Only 12.5% (5/40) of medical students could explain the merits of inhalation therapy compared to oral route. 67.5% (27/40) of participants could not discriminate all types of inhaler devices. With regards to prevention and treatment option for ICS-related local side effects, only 22.5% (9/40) answered correctly. Subjects with good performance grade were found in 12.5% for metered dose inhaler, 40.0% for turbuhaler, and 57.5% for diskus.

Conclusions: We conclude that large percent of medical students were deficient in knowledge and proficiency regarding the inhalers. A brief educational session with demonstration by trained asthma nurse was not effective in enhancing inhaler technique or increasing knowledge on inhaler treatment.