The effectiveness of fexofenadine versus levocetirizine in persistent allergic rhinitis, a randomized controlled study

K. Snidvongs\textsuperscript{1}, C. Rotjanasiriphong\textsuperscript{2}, C. Phannaso\textsuperscript{1}, S. Chusakul\textsuperscript{1}, S. Aeumjaturapat\textsuperscript{1}

\begin{itemize}
\item \textsuperscript{1}Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
\item \textsuperscript{2}Otolaryngology, Maharat Maharat Nakhon Ratchasima Hospital, Maharat Nakhon Ratchasima Hospital, Thailand
\item \textsuperscript{3}Otolaryngology, King Chulalongkorn Memorial Hospital, Bangkok, Thailand
\end{itemize}

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Objectives
Antihistamines are mainly used in treating allergic rhinitis. Various types of H1 receptor antagonists have various pharmacokinetic and pharmacodynamics properties. We aimed to compare the effectiveness of fexofenadine versus levocetirizine in treating patients with persistent allergic rhinitis. Additionally, the effectiveness was compared between local made and original drugs.

Methods
Patients with persistent allergic rhinitis were enrolled during June 2010 to December 2013. Patients were randomized to receive local-made fexofenadine, original fexofenadine or levocetirizine for one week. Daily symptoms were self assessed. Disease specific quality of life, allergen induced wheal and flare size, peak nasal inspiratory flow and adverse events were reported at one week.

Results
Seventy patients were enrolled. There was no significant difference in reduction of mean total symptom score between local-made fexofenadine, original fexofenadine and levocetirizine (0.15, 0.18, 0.16 respectively; P=0.55). Improvement in otolaryngic symptoms (p=0.51), non-otolaryngic symptoms (p=0.59), work and study performance (p=0.42), exertion (p=0.81), sleep disturbance (p=0.76), social performance (p=0.16), emotional disturbance (p=0.66), overall general health (p=0.55), number of days per month absent from work or study (p=0.21), allergen induced wheal (p=0.44) and flare size (p=0.90) and peak nasal inspiratory flow (p=0.85) were not significantly different among three groups. All groups similarly reported minor adverse events.

Conclusion
There is no difference in effectiveness between fexofenadine and levocetirizine in treating persistent allergic rhinitis. Local-made and original fexofenadine similarly improve symptoms, nasal flow and quality of life. There are no major adverse events reported.