Efficacy and Safety of a Once-Daily Sublingual Immunotherapy without Escalation Regimen in House Dust Mite-Induced Allergic Rhinitis

A REVIEW OF THE ARTICLE.
SUE JEAN MUN, MD, JAE MIN SHIN, MD, DOO HEE HAD, MD, ET AL
REVIEWED BY PAUL BURK, DO, FOCO
ALLERGY FELLOWSHIP PROGRAM DIRECTOR: B. MARK WELCH, D.O., FACO
• SLIT without escalation has been reported to reduce allergic symptoms and rescue medications scores in grass and olive sensitized patients

- This study compares the initial efficacy and safety of once-daily SLIT without escalation with conventional SLIT with escalation in house dust mite allergy.

- The study compares the adverse events in the first month, and also compares treatment efficacy and compliance at 6 months.
Methods

- SLIT with escalation was performed as a 4-week escalation.
  - Patients took daily increasing doses of solution over a total of 30 days, reaching a final maintenance dose of 5 drops of 1000 STU*/mL 3 days/week.
- SLIT without escalation was initiated with a single-dose container (SDC) under the tongue. Each SDC contained 0.2mL of extractable volume (corresponding to 5 drops of 1000 STU/mL solution).
- Each patient was followed with a diary card, recording symptom score, rescue medication score, and adverse events.

*Special Treatment Units
Results

- All of the nasal symptoms, including rhinorrhea, sneezing, nasal obstruction, itching, and olfactory symptoms, but not eye symptoms, decreased in the SLIT with escalation group.

- All nasal and eye symptoms improved in the SLIT without escalation group.
The Rescue medication score decreased from 116.2 to 74.1 in SLIT with escalation group, and from 123.3 to 53.1 in the SLIT without escalation group.

(Rescue meds were given to control allergic symptoms if needed---nasal/oral/ocular antihistamines, and TNS)
Adverse events were reported in 29/75 patients in the SLIT with escalation group:
- 7 complained of local irritation symptoms
- 8 patients had GI symptoms
- 9 had other minor symptoms
- Respiratory symptoms reported in 4 patients

Adverse events were reported in 28/78 patients in the SLIT without escalation group:
- 25 complained of aggravation of symptoms
- 9 reported local irritation
- 4 had GI symptoms
- 10 had other minor symptoms
- 3 Experienced respiratory symptoms.

In the patients who experienced dyspnea or stridor, all symptoms improved within a few minutes, without need for any medication, and there were no anaphylactic events.
In the SLIT with escalation group, 47.6% of patients were satisfied with SLIT, 45.2% selected fair, and 7.1% were dissatisfied with SLIT.

In the SLIT without escalation group, 73.5% were satisfied, 23.5% selected fair, and 2.9% were dissatisfied with SLIT.
In the SLIT with escalation group, 21/75 dropped out (28%). Most frequent reason was inability to take medication according to schedule.

In the SLIT without escalation group, 21/78 dropped out (26.9%). An inability to take medication according to schedule was most frequent reason.
Conclusion

- The reason patient satisfaction in the SLIT without escalation group was higher is not clear
  - May be that better efficacy and the ease of use without schedule changes during the buildup period.
- Unclear why the SLIT without escalation group showed better improvements in Total Nasal Symptom Score and Rescue Medication Score than the SLIT with escalation group.
  - Possibly due to fact that the high concentration of allergen extracts applied every day may facilitate its clinical effects.
- Once-daily SLIT without escalation has proven to be a safe and well-tolerated method and could be an alternative administration method for house dust mite-sensitized AR patients.
- Long-term studies are still needed.
Sue Jean Mun, MD, Jae Min Shin, MD, Doo Hee Han, MD, et al.
**Example Case 1**

- **Chief Complaint:** Allergic rhinitis, Welts on leg after SCIT

- **HPI:** 55 yo female with history of SCIT x 3 years. She has noticed benefit in her allergic symptoms, but after her most recent injection, she developed welts on her lower legs. She has a friend (also our patient) that is on SLIT, and patient wants to try SLIT instead. She does not have a history of asthma, PFT have always been normal in our office, and she has never had respiratory symptoms after SCIT.

- **PMH:** Allergic rhinitis
- **PSH:** appendectomy
- **FH:** Non-contributory
- **Allergies:** NKDA
- **ROS:** See HPI
Example Case 1 (con’t)

- **Physical Exam---pertinent**
  - **Ears**: eac’s clear—b/l, TM’s intact, no effusion
  - **Nose**: Septum midline, Pale, hypertrophic turbinates
  - **Throat**: Tonsils 1+, no lesions or masses.
  - **Eyes**: PERRL, EOMI

- **Assessment**: Allergic Rhinitis, currently on SC IT with adverse reaction (welts on lower leg)

- **Plan**: Convert patient to SLIT----?candidate for rapid escalation