



For Immediate Release

HKSH Announces Pioneering Research Findings on Immunotherapy for Co-morbid Allergic Conditions

(31 December 2019, Hong Kong) A two-year pioneering research study on the effectiveness of Allergen Immunotherapy (AIT) on co-morbid diseases was conducted by Allergy Centre of Hong Kong Sanatorium & Hospital (HKSH) with findings published in the international medical journal *Immunotherapy* in November 2019. A total of 120 patients with house dust mite-induced allergic rhinitis joined the treatment programme under this Study. Results showed that AIT could remarkably reduce the symptoms of allergic rhinitis by over 50% while also effectively relieving other co-morbid allergic conditions including asthma, conjunctivitis and atopic dermatitis (or eczema). As the first clinical study on AIT in Hong Kong, the Study is also an international first that focuses on the effectiveness of AIT for co-morbid allergic diseases.

Allergic rhinitis is one of the most common allergic problems in Hong Kong. Earlier some local studies showed that one-third of primary school students suffered from allergic rhinitis, mostly induced by house dust mite. The situation worsens during seasonal changes. House dust mite is a kind of indoor microorganism usually found in mattresses, pillows, sofas and carpets. Not only will it induce allergic rhinitis, but also other co-morbid allergic conditions mentioned above, impacting patients' quality of life significantly.

Dr. Tak LEE, Director of Allergy Centre and Specialist in Immunology & Allergy, Hong Kong Sanatorium & Hospital said, "The first clinical use of allergen immunotherapy was documented in a medical journal over a century ago. In 1953, Dr. William FRANKLAND, an allergist from the UK reintroduced the concept of desensitising patients through exposure to small amounts of the substance to which they were allergic, and conducted the first clinical control trial on AIT."

Dr. LEE continued, "Established in 2012, HKSH's Allergy Centre is among the first to introduce AIT into Hong Kong. AIT modifies the immune system by administering gradual doses of the allergen through either sublingual or subcutaneous route, hence increasing patients' tolerance towards the allergen."

Dr. Alson CHAN, Honorary Consultant in Allergy and Specialist in Paediatric Immunology & Infectious Diseases of Allergy Centre, Hong Kong Sanatorium & Hospital explained, "The treatment period for Sublingual Immunotherapy (SLIT) usually takes about 2 to 3 years, some patients showed improvements in allergic symptoms after a few weeks of treatment and some patients can expect to be symptoms-free for life as this treatment tackles the problem at the root. Immunotherapy for treating allergies has been recognised by the medical sector worldwide. However, there is a lack of local research. The objective of this Study is to learn more about the effectiveness of SLIT in Chinese population. The Study also sheds light on the direction of future clinical research."

A total of 120 patients aged 5 to 56 with house dust mite-induced allergic rhinitis joined this Study during January 2016 to December 2017. They were divided into two groups: the SLIT group with 80 patients underwent SLIT, while the control group with 40 patients used conventional medications as usual (such as nasal topical steroids and anti-histamine). During this Study the



severity of patients' symptoms were recorded by a standardised questionnaire. For example, patients were asked to rate the severity of their nasal symptoms (e.g. runny nose, blocked nose, sneezing, itchy nose, etc.) and other co-morbid allergic conditions including asthma, conjunctivitis and atopic dermatitis (or eczema). The amount of medications consumed during this Study was also recorded, which objectively reflected the severity of patients' symptoms and the effectiveness of SLIT.

Following 12 months of SLIT, there was a significant reduction in symptom scores of allergic rhinitis from mean 22 to 10.2 (a drop of 53.6%), while no significant change was observed in the control group (from 19.7 to 18.3). The table below summarises the results:

Allergy disease	Symptom score (SLIT group)	Symptom score (Control group)
House dust mite-induced allergic rhinitis	22.0→10.2 (↓53.6%)	19.7→18.3 (↓7.1%)
Conjunctivitis	20.9→10.0 (↓52.1%)	8.1→9.1 (↑12.4%)
Atopic dermatitis	46.4→29.4 (↓36.7%)	33.2→25.0 (↓24.8%)
Asthma	17.8→8.8 (↓50.5%)	16.9→15.1 (↓10.7%)

The performances of the SLIT group were significantly better than that in the control group for all related allergic symptoms. The use of nasal topical steroids and anti-histamine were also reduced in the SLIT group by 75% and 50% respectively. While in the control group, the use of nasal topical steroids consumption increased while it remained similar for anti-histamine.

Dr. Alson CHAN concluded, “The Study proved that AIT can target co-morbid allergic conditions, providing important local clinical data to the medical sector. SLIT has been confirmed by National Institute for Health and Care Excellence (NICE) health economic study using quality-adjusted life-year (QALY). The cost-effectiveness of SLIT is impressive as it can lower patient's overall allergic tendency, prevent the emergence of new allergic symptoms, thus improve patient's quality of life. The symptoms were significantly relieved for those patients who received SLIT during the 12 months observation period. Further improvement is expected when the whole treatment programme completes.”

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HKSH Medical Group

Officially launched in September 2017, promotes public health and advanced medicine through a multi-faceted, coordinated approach in clinical services, medical education, scientific research and public health education. Members of the Group, including Hong Kong Sanatorium & Hospital, HKSH Healthcare HKSH Eastern Medical Centre, are dedicated to offering top-quality holistic care to patients, upholding the motto “Quality in Service, Excellence in Care”.

Hong Kong Sanatorium & Hospital

Hong Kong Sanatorium & Hospital is one of the leading private hospitals in Hong Kong. With the motto “Quality in Service Excellence in Care”, the Hospital is committed to serving the public as well as promoting medical education and research.

Allergy Centre

The Allergy Centre at Hong Kong Sanatorium Hospital was established in March 2012. It was the first time such a Centre had been created in a private and public hospital in Hong Kong. The Centre provides a patient-orientated, comprehensive, holistic and multi-professional clinical service of excellence. It educates the profession and allied health professionals about allergies. It engages the public and undertakes clinical research.

The Centre sees patients with any allergy or related problems

- Allergic conjunctivitis
- Allergic rhinitis
- Anaphylaxis
- Asthma
- Bronchopulmonary aspergillosis
- Drug allergy
- Eosinophilic disorders, including eosinophilic gastroenteritis / oesophagitis
- Food allergy
- Hives, eczema, angioedema
- Hypersensitivity pneumonitis
- Insect allergy
- Oral allergy syndrome

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Photo:

1. The Study results showed that Sublingual Immunotherapy (SLIT) could remarkably reduce the symptoms of allergic rhinitis by over 50% while also effectively relieving other co-morbid conditions, such as allergic conjunctivitis, asthma, atopic dermatitis (or eczema). **Dr. Tak LEE**, Director of Allergy Centre and Specialist in Immunology & Allergy, Hong Kong Sanatorium & Hospital (second from right), **Dr. Alson CHAN**, Honorary Consultant in Allergy and Specialist in Paediatric Immunology & Infectious Diseases of Allergy Centre, Hong Kong Sanatorium & Hospital (third from right), together with two patients with house dust mite allergies who have undergone sublingual immunotherapy (SLIT) for two years, **Shirley** (first from right), **Lok Ching** (second from left) and **Lok Ching's grandmother** (first from left).



2. **Dr. Tak LEE** (right) and **Dr. Alson CHAN** (left)





3. **Dr. Tak LEE** introduced the mechanism of allergy immunotherapy.



4. **Dr. Alson CHAN** explained proper steps of administering the immunotherapy medications sublingually.





5. **Shirley** found relief from house dust mite-induced allergies after receiving sublingual immunotherapy (SLIT) for over two years.



6. **Lok Ching** (right) started sublingual immunotherapy (SLIT) at age three, and improvements were almost immediate after 3 months of treatment. Lok Ching was accompanied by her grandmother.



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