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Hong Kong Sanatorium & Hospital

For Immediate Release

**Hong Kong Sanatorium & Hospital – Allergy Centre
Pioneer Clinical Study for Peanut Allergy in Hong Kong
A New Customized Desensitization Treatment for Peanut Allergic Patient**

(16 April 2014 – Hong Kong) A pilot study conducted by Hong Kong Sanatorium & Hospital's Allergy Centre has found that a dual treatment approach combining the use of anti-IgE (omalizumab, a drug that reduces allergic reaction) and oral desensitization has been successful in increasing tolerance for peanuts in patients suffering from peanut allergy.

The first-in-Hong Kong study was conducted on 4 patients aged between 8 and 12 years-old with moderate to severe peanut allergy in February 2013.

Director of Allergy Centre, Dr. LEE Tak Hong said after 6 months of treatment, the patients could eat 9 peanuts or equivalent amount of peanut flour daily, and 11 to 20 peanuts or equivalent amount of peanut flour at a food challenge. The pioneering desensitization protocol brings hope to patients suffering from peanut allergy.

Revealing findings of the pilot study, Dr. LEE said at a media briefing that the research has been successful and all participants' peanut tolerance has increased significantly, improving from showing severe allergic reaction after eating a tiny fragment of peanut to being capable of ingesting a portion equivalent to 11 to 20 peanuts in the food challenge at Week 26.

When they were invited to join in the pilot study, skin prick tests had confirmed that these patients were very allergic to peanut extract and could only tolerate less than one peanut when they underwent a food challenge.



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“It is a remarkable improvement in peanut tolerance from 470 to 4800 fold. One of the participants developed a mild allergic reaction (tummy pain) during oral desensitization but the symptom resolved rapidly without extra treatment needed.” he said.

At present, the prevalence of peanut allergy in Hong Kong is estimated at about 0.3% but there is an upward trend in both Hong Kong and worldwide. Symptoms of peanut allergy range from a minor irritation to a life-threatening reaction (anaphylaxis). For some patients, even a tiny amount of peanut can cause a serious reaction.

Doctors will normally encourage strict avoidance of peanut for peanut allergic individuals, but annual incidence rates of accidental peanut exposure are common occurring up to 50% worldwide, said Miss June CHAN King Chi, Senior Dietitian of HKSH who was involved in the pilot study.

“An allergic response to peanut usually appears within minutes after the exposure, which can occur in different ways. Most commonly, allergy may result from direct contact - ingesting peanut or peanut-containing food, or even direct skin contact with peanuts. Problem may also arise in a cross-contact scenario with the unintended introduction of peanut into a product which is generally the result of the food being contaminated during processing or handling.” Miss CHAN explained.

It is already known that peanut allergy can be reduced by oral desensitization, but the incidence of severe allergic reactions during the treatment has limited its clinical use. “Oral desensitization is often considered undesirable in view of the allergic complications induced. In the current study, we treated patients with anti-IgE (omalizumab) with a view to lowering the level of the IgE in the first stance, thus substantially reducing side effects caused by the desensitization, allowing successful treatment and eliminating allergy that could be life



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threatening.” Dr. LEE noted.

“The outcome has been very encouraging because peanut-allergic patients will no longer need to worry about allergic problems arising from any accidental exposure. All the participants are now able to eat at least 9 peanuts daily, which are far greater than the amount of peanut that they might accidentally consume, so they are now protected.” he continued.

During the first 18 weeks, the patients were injected once or twice a month with anti-IgE (omalizumab), the drug which lowers the level of IgE, thus reducing the chances of developing an allergic reaction. The dose of anti-IgE administered was customized to each subject’s total serum IgE level and body weight.

From Week 12 to Week 26 (escalation phase), patients began their oral desensitization programme by ingesting daily doses of peanut that were gradually increased biweekly under supervision in a controlled manner up to the equivalent of 9 peanuts daily at Week 26. A food challenge (up to a maximum amount of peanut flour equivalent to 20 peanuts) was given to the patients at Week 26 to test their peanut tolerance.

At Week 26 to Week 182 (maintenance phase), the patients will eat 9 peanuts daily for 36 months to maintain the level of peanut tolerance in the immune system. When the 36-month maintenance phase is over, patients will be asked to stop ingesting peanut and will be subjected to further review for another 36 months to ensure long term tolerance.

A similar research study was recently conducted in the United States, which has a peanut allergy prevalence of 0.6%. The study combined the use of omalizumab and oral peanut desensitization for 13 peanut allergic patients aged from 7 to 25 years old. Although there are some significant differences in the duration of both omalizumab treatment and oral peanut



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desensitization between the Hong Kong and USA research studies, the USA study also showed that their patients tolerated 160 to 400 fold more peanut flour after using a combination treatment of anti-IgE and oral peanut desensitization, similar to the outcomes obtained in the study in Hong Kong.

“The combined treatment approach may be extended to treating other types of severe food allergies in future and allow food desensitization to be undertaken more safely.” Dr. LEE said.

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Additional information

Patient sharing

Tiffany, 9 year-old girl, has suffered from peanut allergy since she was a toddler. When she was around 12 months old, her parents began to notice that she would have a sore throat and swollen lips after drinking peanut-containing soup. Since then, any accidental intake of peanut-containing food would lead to shortness of breath and swollen lips with blisters. It has a huge impact on the family since they have to carry emergency medication with them all the time, while staying exceptionally vigilant to avoid all peanut-containing foods. “In the past, my classmates gave me candies but I could not eat them because I did not know if they contained peanuts or not. I was so upset. Thanks to the treatment, I am now able to eat candies, ice-cream and snacks that contain peanut.”

Tiffany joined the research in February 2013. Her tolerance to peanut was less than 1 peanut at the beginning, but she is now able to eat at least 9 peanuts daily after treatment. Her parents are very satisfied with the outcome and feel relieved when dining out.



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About 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.

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Photos:

1. Dr. LEE Tak Hong, Director of Allergy Centre at HKSH said, lowering the level of the IgE before undergoing the oral desensitization in peanut allergic patients can effectively eliminate the side effect of the desensitization.



2. Miss June CHAN King Chi, Senior Dietitian of Allergy Centre at HKSH stated, patients' peanut tolerance has been increased to at least 9 peanuts. Even if they accidentally ingest peanut-containing foods, allergic reaction will not appear easily, thus their lives are protected.



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3. (From left) Dr. LEE Tak Hong, Miss June CHAN King Chi, Mr TSANG, father of peanut allergic patient and (front) patient Tiffany.



4. The peanut flour, mixing with apple sauce makes it easier for peanut allergic patients to ingest.



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5. All patients would undergo skin prick test before the treatment, allowing doctors to understand the extent of their allergic level.



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