

PENGARUH PEMBERIAN IMUNOTERAPI PADA LEVEL SENSITISASI ALERGEN PADA PASIEN ANAK ASMA

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INTISARI

Latar belakang: Asma merupakan suatu kondisi inflamasi dan hipersensitivitas dimana terjadi obstruksi pada sistem pernafasan yang dapat berkontribusi menyebabkan kematian pada anak. Faktor yang mencetuskan terjadinya asma salah satunya ialah sensitisasi alergen. Beberapa penelitian mengenai imunoterapi menunjukkan hasil yang memuaskan dalam mengurangi sensitisasi alergen. Pemberian imunoterapi diharapkan dapat mencegah berkembangnya asma.

Tujuan: Mengetahui pengaruh pemberian imunoterapi pada pasien asma anak terhadap perubahan jumlah alergen serta ukuran sensitisasi masing-masing alergen.

Metode: Dilakukan Post Hoc studi dari *Randomized Controlled Trial* pada 51 peserta anak asma yang berobat di Poli Anak RSUP Dr. Sardjito periode Maret 2021-Januari 2022. Sampel diambil secara *total population* dari *Case Report Form* peserta RCT. Pengolahan data menggunakan perangkat lunak program pengolahan data yang terkomputerisasi. Perbedaan level sensitisasi alergen antara imunoterapi dan tidak imunoterapi ditentukan menggunakan analisis bivariat Chi Square.

Hasil: Sebanyak 51 peserta diikutsertakan terbagi 24 kelompok terapi standar dan 27 kelompok terapi standar dan imunoterapi, dengan median usia 7,0 (min-max: 4,0-17,0) tahun. Proporsi sensitisasi alergen yang terbanyak dalam penelitian ini adalah *House Dust Mite* (79,2%). Terdapat penurunan sensitisasi alergen di kelompok standar imunoterapi ($p < 0,05$) pada minggu ke-1 ke minggu ke-7. Demikian juga didapatkan penurunan total ukuran diameter sensitisasi yang signifikan ($p < 0,05$) serta ukuran sensitisasi per alergen pada kelompok standar imunoterapi ($p < 0,05$).

Kesimpulan: Pengobatan kombinasi terapi standar dan imunoterapi dari minggu 1 sampai minggu 7 dapat mengurangi jumlah sensitisasi dan mengurangi ukuran indurasi sensitisasi alergen menggunakan SPT (*Skin Prick Test*).

Kata kunci: asma, sensitisasi alergen, imunoterapi

THE EFFECTS OF IMMUNOTHERAPY ON ALLERGENS SENSITIZATION LEVELS IN CHILD ASTHMA

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ABSTRACT

Background: Asthma is a chronic disease of the air passages characterized by inflammation and narrowing of the airways that can leading cause mortality in children. One of the factors that trigger to occurrence of asthma is allergen sensitization. Several studies on immunotherapy have shown good results in reducing allergen sensitization. Giving immunotherapy is expected to prevent the development of asthma and can become a standard therapy for asthma in the future.

Objective: To determine the effect of immunotherapy in the pediatric asthma patients on changes in the amount of allergens and the size of sensitization of each allergen.

Methods: A Post Hoc study from RCT was carried out on 51 participant in children with asthma who were treated at pediatric outpatient clinic of Dr. Sardjito Hospital during Maret 2021- January 2022. The total population sample was taken from the Case Report Form of RCT participants. Data processing using computerized statistical software. Differences in allergen sensitization levels between immunotherapy and non-immunotherapy were determined using Chi Square bivariate analysis.

Results: A total of 51 participants were included, divided into 24 standard therapy groups and 27 standard therapy and immunotherapy groups, with median age of 7,0 (min-max 4,0-17,0) years. The highest proportion of allergen sensitization in this study is *House Dust Mite* (79,2%). There was a decrease in allergen sensitization in standard immunotherapy group ($p < 0,05$) from week 1 to week 7. There was significant decrease in the total sensitization diameter size ($p < 0,05$) and sensitization per allergen size in the satandard immunotherapy ($p < 0,05$).

Conclusions: The combination of immunotherapy with standard therapy from week 1 to week 7 is able to reduce the amount of sensitization and size of sensitization induration using SPT

Keywords: asthma, allergen sensitization, immunotherapy