



## INTISARI

**Latar belakang:** Asma pada anak merupakan penyakit inflamasi kronik saluran napas yang sering berhubungan dengan rinitis alergi sebagai komorbid. Berdasarkan konsep *united airway disease* (UAD), inflamasi pada saluran napas atas dan bawah saling berkaitan sehingga komorbid rinitis alergi dapat memengaruhi kontrol gejala, keparahan asma, serta respons terhadap terapi termasuk imunoterapi. Tingginya prevalensi rinitis alergi pada anak dengan asma dan dampaknya terhadap respons terapi, diperlukan penelitian mengenai pengaruh komorbiditas rinitis alergi terhadap keberhasilan imunoterapi pada anak dengan asma.

**Tujuan:** Penelitian ini bertujuan untuk mengetahui pengaruh komorbiditas rinitis alergi terhadap keberhasilan imunoterapi pada anak dengan asma.

**Metode:** Penelitian ini merupakan studi kohort menggunakan data pasien anak dari penelitian *Randomized Controlled Trial* (RCT) yang menjalani imunoterapi. Sebanyak 27 anak dengan asma dianalisis dan dikelompokkan menjadi dua, yaitu dengan dan tanpa rinitis alergi. Data yang dikaji meliputi karakteristik dasar, jumlah alergen dan total diameter alergen pada *skin prick test* (SPT) baseline, serta skor *Asthma Control Test* (ACT) pada minggu ke-7. Analisis perbandingan dilakukan dengan uji statistik sesuai jenis data dengan tingkat signifikansi  $p < 0,05$ .

**Hasil:** Dari total 27 peserta, 21 anak (77,8%) memiliki rinitis alergi sebagai komorbid. Karakteristik dasar kedua kelompok tidak menunjukkan perbedaan bermakna. Tidak terdapat perbedaan skor ACT antara kelompok rinitis dan tanpa rinitis pada minggu pertama ( $p=1.00$ ) maupun minggu ketujuh ( $p=0.628$ ). Komorbiditas rinitis alergi tidak memengaruhi respons imunoterapi.

**Kesimpulan:** Komorbiditas rinitis alergi tidak berpengaruh signifikan terhadap keberhasilan imunoterapi pada anak dengan asma.

**Kata kunci:** Asma Anak, Rinitis Alergi, Imunoterapi, Keberhasilan, ACT.



## ABSTRACT

**Background:** Asthma in children is a chronic inflammatory disease of the airways that is frequently associated with allergic rhinitis as a comorbidity. Based on the concept of united airway disease (UAD), inflammation of the upper and lower airways is interconnected; therefore, comorbid allergic rhinitis may influence symptom control, asthma severity, and response to therapy, including immunotherapy. Given the high prevalence of allergic rhinitis among children with asthma and its impact on therapeutic response, further studies are needed to evaluate the effect of allergic rhinitis comorbidity on the success of immunotherapy in children with asthma.

**Objective:** This study aimed to assess the influence of comorbid allergic rhinitis on the effectiveness of immunotherapy in children with asthma.

**Method:** This study was a cohort study using pediatric patient data derived from a Randomized Controlled Trial (RCT) involving immunotherapy. A total of 27 children with asthma were analyzed and divided into two groups: with and without allergic rhinitis. The data assessed included baseline characteristics, the number of allergens and the total allergen wheal diameter on baseline skin prick testing (SPT), as well as the Asthma Control Test (ACT) score at week 7. Comparative analyses were performed using appropriate statistical tests according to data type, with a significance level set at  $p < 0.05$ .

**Results:** Of the total 27 participants, 21 children (77.8%) had allergic rhinitis as a comorbidity. Baseline characteristics did not differ significantly between the two groups. There were no significant differences in Asthma Control Test (ACT) scores between the allergic rhinitis and non-allergic rhinitis groups at week 1 ( $p = 1.00$ ) or week 7 ( $p = 0.628$ ). Allergic rhinitis comorbidity did not affect the response to immunotherapy.

**Conclusion:** Allergic rhinitis comorbidity did not have a significant effect on the success of immunotherapy in children with asthma.

**Keywords:** Childhood Asthma, Allergic Rhinitis, Immunotherapy, Treatment Outcomes, Asthma Control Test (ACT).