

Hasil imunodiffusion test aspergillus pada pasien asma di Rumah Sakit Umum Pusat Persahabatan dikaitkan dengan tingkat kontrol asma dan fungsi paru = Aspergillus immunodiffusion test result in asthma patients at Persahabatan Hospital associated with asthma control level and lung function

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Abstrak

Latar Belakang: Paparan terhadap jamur telah diketahui berperan dalam perburukan gejala asma, fungsi paru yang buruk, rawat inap dan kematian. Kolonisasi atau paparan jamur dapat mencetuskan respons alergi dan inflamasi paru. Sensitivitas jamur oleh Aspergillus dapat menyebabkan Allergic Bronchopulmonary Aspergillosis (ABPA) maupun Severe Asthma with Fungal Sensitization (SAFS). Pemeriksaan Immunodiffusion test (IDT) merupakan uji serologi untuk mengetahui terdapatnya antibodi anti-Aspergillus, namun pemeriksaan ini belum banyak digunakan di Indonesia dan perannya terhadap pasien asma belum diketahui.

Metode: Penelitian ini adalah penelitian prospektif dengan metode consecutive sampling dan desain potong lintang. Subjek penelitian ini adalah pasien asma yang berobat di Poliklinik Asma Rumah Sakit Persahabatan, Jakarta. Subjek penelitian menjalani pemeriksaan spirometri, Asthma Control Test (ACT) dan serologi antibodi anti-Aspergillus dengan metode IDT Aspergillus menggunakan crude antigen Aspergillus.

Hasil: Subjek penelitian ini sebanyak 59 pasien. Sejumlah 49 subjek (83,1%) berjenis kelamin perempuan, 37 subjek (62,7%) berusia ≤ 50 tahun, 45 subjek (76,3%) berpendidikan SLTA atau lebih, 25 subjek (42,4%) obesitas I, 5 subjek (8,5%) obesitas II dan 11 subjek (18,6%) bekas perokok. Sebagian besar subjek (62,71%) merupakan pasien asma persisten sedang. Asma terkontrol penuh ditemukan pada 7 subjek (11,86%), sedangkan asma tidak terkontrol pada 32 subjek (54,24%). Derajat obstruksi yang terbanyak ditemukan adalah obstruksi sedang pada 31 subjek (52,5%). Nilai %VEP1 ≥ 80 prediksi setelah uji bronkodilator ditemukan pada 24 subjek (40,7%). Dari 59 sampel darah yang diperiksa, tidak ada yang menunjukkan hasil IDT positif (0%), termasuk subjek yang datang dalam keadaan eksaserbasi dan subjek dengan asma persisten berat.

Kesimpulan: Hasil positif pemeriksaan IDT Aspergillus pada pasien asma sebesar 0%. Pemeriksaan IDT Aspergillus tidak dapat digunakan secara tunggal tanpa pemeriksaan lain untuk mendeteksi sensitivitas terhadap Aspergillus pada pasien asma dan tanpa validasi terhadap crude antigen Aspergillus yang digunakan.

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Background: Exposure to fungi has been known to play a role in worsening symptoms of asthma, poor lung function, hospitalization and death. Fungal colonization or exposure can trigger an allergic response and lung inflammation. Fungal sensitization by Aspergillus spp. can cause allergic bronchopulmonary aspergillosis (ABPA) or severe asthma with fungal sensitization (SAFS). Immunodiffusion test (IDT) is a

serological test to determine the presence of anti-Aspergillus antibodies, but this examination has not been widely used in Indonesia and its role in asthma patients is unknown.

Method: This study was a prospective study with consecutive sampling method and cross-sectional design. The subjects were asthma patients treated at Asthma Outpatient Clinic at Persahabatan Hospital Jakarta, Indonesia. Subjects underwent spirometry, Asthma Control Test (ACT) and serology of anti-Aspergillus antibodies examination with the IDT Aspergillus method using crude antigen Aspergillus.

Results: The subjects of this study were 59 patients. A total of 49 subjects (83.1%) were females, 37 subjects (62.7%) were ≥50 years old, 45 subjects (76.3%) had high school education level or higher, 25 subjects (42.4%) were obese I, 5 subjects (8.5%) were obese II and 11 subjects (18.6%) were former smokers. Most subjects (62.71%) were moderate persistent asthma patients. Fully-controlled asthma was found in 7 subjects (11.86%), while uncontrolled asthma was found in 32 subjects (54.24%). The highest degree of obstruction found was moderate obstruction in 31 subjects (52.5%). The %VEP1 ≥80% predicted after the bronchodilator test was found in 24 subjects (40.7%). Of the 59 blood samples examined, none showed positive IDT results (0%), including subjects who came in exacerbations and subjects with severe persistent asthma.

Conclusion: Positive results of IDT Aspergillus examination in asthma patients were 0%. The Aspergillus IDT examination cannot be used singly without other examinations to detect Aspergillus sensitization in asthmatic patients and without validation of the crude antigen Aspergillus used.