

Pola respon IgG dengan profil berat molekul antigen aspergillus spp. pada pasien diduga aspergilosis paru kronik = The IgG responses against Aspergillus spp. antigens in suspected chronic pulmonary aspergilosis patients

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Abstrak

Kasus aspergilosis paru kronik (APK) yang disebabkan Aspergillus sp. semakin meningkat seiring dengan meningkatnya frekuensi infeksi tuberkulosis (TB) paru sebagai faktor risiko. Diagnosis APK masih menjadi tantangan karena gejala klinis, pemeriksaan radiologi, maupun laboratorium tidak khas. Untuk menetapkan diagnosis APK diperlukan pemeriksaan laboratorium mikologi, termasuk uji serologi. Hasil pemeriksaan imuno-diffusion test (IDT) Aspergillus dengan crude antigen kurang optimal dan IgG Aspergillus ELISA menggunakan antigen galaktomanan yang termasuk antigen sel T independent sehingga tidak mendukung switching isotype antibodi. Oleh sebab itu, diperlukan penelitian lain untuk mendapatkan prosedur yang lebih baik dalam menetapkan diagnosis APK. Tujuan penelitian ialah mengetahui pola respon IgG terhadap kombinasi empat protein 16 kD, 18-20 kD, 22 kD, dan 30 kD antigen Aspergillus dengan metode Western Blot. Potensi diagnostik dari kombinasi protein 16 kD, 18-20 kD, 22 kD, dan 30 kD antigen Aspergillus dengan metode Western Blot terhadap nilai konsensus positif dan negatif APK berdasarkan 2 metode pemeriksaan yaitu biakan jamur dan IgG anti galaktomanan sebagai baku emas didapatkan nilai sensitivitas dan spesifisitas sebesar 74% dan 96%. Deteksi IgG Aspergillus metode Western Blot menunjukkan antigen dominan berat molekul 16 kD dan 18-20 kD. Kesimpulan uji IgG Aspergillus Western Blot memiliki potensi diagnostik lebih baik dibanding uji IgG Aspergillus ELISA.

.....Chronic pulmonary aspergillosis (CPA) caused by Aspergillus sp. potentially increases with the increasing frequency of pulmonary tuberculosis (TB) as a risk factor. Diagnosis of CPA is still a challenge because clinical symptoms, radiological examination, and laboratory are not specific. The diagnosis of CPA needs to be performed by specific mycological examination, including serology test. The result of the Aspergillus immunodiffusion test (IDT) with crude antigen is sub optimal and Aspergillus IgG ELISA method uses galactomannan antigens that are independent T cell antigens, so cant support switching of isotype antibodies. Therefore, other study is needed to get a better procedure in determine the CPA diagnostic. The study aimed to determine the IgG responses with a combination of Aspergillus proteins (16 kD, 18-20 kD, 22 kD, and 30 kD) with Western Blot method. Diagnostic potential of the Aspergillus protein combination (16 kD, 18-20 kD, 22 kD, and 30 kD) with Western Blot method on positive and negative consensus values of CPA based on two examination methods are fungus culture and anti-galactomannan IgG as gold standard are obtained sensitivity and specificity of 74% and 96%. From the Aspergillus Western Blot IgG test, dominant antigens obtained were molecular weights of 16 kD and 18-20 kD. The conclusion is Aspergillus specific IgG test with Western Blot method has better diagnostic potential than the anti-galactomannan IgG ELISA method.