

# Perbandingan Hasil Deteksi Antibodi Spesifik Aspergillus Metode Immunochromatography Test (ICT) dengan Enzyme Linked Immunosorbent Assay (ELISA) pada Pasien TB Paru = Comparison between Aspergillus-specific Antibody Detection Using Immunochromatography Test (ICT) and Aspergillus-specific IgG Enzyme Linked Immunosorbent Assay (ELISA) Method in Pulmonary TB Patients

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## Abstrak

Latar belakang: Indonesia memiliki beban tuberkulosis (TB) paru tinggi. Aspergilosis paru kronik (APK) sering ditemukan pada pasien TB. Diagnosis APK menjadi tantangan di Indonesia karena keterbatasan sumber daya. Diperlukan alat diagnostik yang mudah, murah, dan memberikan hasil cepat dengan akurasi baik untuk membantu menegakkan diagnosis APK. Penelitian ini bertujuan untuk mengetahui nilai diagnostik ICT Aspergillus pada pasien TB paru.

Metode: Penelitian ini berdesain potong lintang dan merupakan bagian dari penelitian payung tentang diagnosis APK pada pasien TB paru di Jakarta. Serum pasien TB paru yang memenuhi kriteria inklusi diperiksa menggunakan ICT Aspergillus (LDBio, Diagnostics, Lyon, France) dan IgG Spesifik Aspergillus ELISA (Bordier affinity products, Crissier, Switzerland) sesuai protokol di Laboratorium Mikologi Departemen Parasitologi FKUI pada Februari-November 2021.

Hasil: Dari 105 subjek penelitian yang memenuhi kriteria inklusi, sebanyak 58,1% adalah laki-laki. Rerata usia pasien 47,1617,1 tahun. Proporsi hasil positif ICT Aspergillus adalah 10,5% dan IgG spesifik Aspergillus ELISA 43,8%. Sensitivitas ICT Aspergillus 23,9%, dengan spesifisitas 100%, nilai duga positif 100%, dan nilai duga negatif 62,8%.

Kesimpulan: Kemampuan diagnostik ICT Aspergillus belum optimal sebagai alat skrining, tetapi dapat dipertimbangkan sebagai alat diagnosis pasien TB paru suspek APK pada daerah dengan sumber daya terbatas.

.....ackground: Indonesia has high pulmonary tuberculosis (TB) burden. Chronic pulmonary aspergillosis (CPA) is common in pulmonary TB patients. Diagnosing CPA is challenging in Indonesia because of the limited resources available. A new rapid and robust diagnostic tool is needed. This research aims to evaluate the diagnostic value of the ICT Aspergillus in pulmonary TB patients.

Methods: This cross-sectional study is a part of the CPA diagnostic research of pulmonary TB patients. Pulmonary TB patients' serum fulfilling the inclusion criteria were assessed using ICT Aspergillus (LDBio, Diagnostics, Lyon, France) and Aspergillus-specific IgG ELISA (Bordier affinity products, Crissier, Switzerland) in Mycology Laboratory of Parasitology Department FMUI in February-November 2021.

Results: From 105 subjects included, the proportion of men 58,1% with 47,1617,1 years age means. The Aspergillus IgG was positive in 10,5% patients with ICT, and 43,8% with ELISA. The sensitivity of ICT Aspergillus was 23,9%, the specificity was 100%, the positive predictive value was 100%, and the negative predictive value was 62,8%.

Conclusion: ICT Aspergillus has a fair diagnostic capacity in pulmonary TB patients as screening tools for

CPA. However, the usage of ICT Aspergillus as point-of-care test in limited-resource settings needs to be considered.