

Perbandingan Hasil Pemeriksaan Immuno-chromatography Test (ICT) LD Bio Aspergillus dan IgG Spesifik Aspergillus pada Pasien Bekas TB di RSUP Persahabatan = Comparison of LD Bio Aspergillus Immuno-chromatography Test (ICT) with Aspergillus-Specific IgG in Previous Pulmonary TB Patients at Persahabatan Hospital

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Abstrak

Latar belakang: Aspergilosis paru kronik (APK) merupakan komplikasi yang sering menyebabkan munculnya sekuela respiratori pada pasien bekas tuberkulosis (TB) paru. Diagnosis APK dapat dilakukan dengan pemeriksaan serologi IgG spesifik Aspergillus. Metode tersebut memerlukan waktu tertentu, sumber daya, dan fasilitas khusus, sehingga sulit diterapkan di fasilitas kesehatan dengan sumber daya terbatas. Metode baru Immunocromatography Test (ICT) LD Bio Aspergillus dilaporkan lebih mudah digunakan, cepat dan murah; tetapi akurasi diagnostiknya belum diketahui di Indonesia.

Tujuan: Penelitian ini bertujuan untuk mengetahui akurasi diagnostik LD Bio ICT Aspergillus dibandingkan dengan IgG spesifik Aspergillus pada pasien bekas TB.

Metode: Penelitian dengan desain potong lintang ini dilakukan dari April 2019 – Oktober 2020. Perekrutan subjek dilakukan di RSUP Persahabatan dan prosedur pemeriksaan mikologi dilakukan di Laboratorium Parasitologi FKUI. Serum pasien bekas TB diperiksa menggunakan LD Bio ICT Aspergillus dan IgG spesifik Aspergillus Dynamiker ELISA. Hasil kedua pemeriksaan dibandingkan untuk melihat akurasi diagnosis LD Bio ICT.

Hasil: Dari 82 pasien yang sesuai dengan kriteria inklusi, terdapat 57 pasien (69,5%) laki-laki, rerata usia pasien $51,27 \pm 12,55$ tahun. Median IMT 18,67 (10,38-31,18). Sebanyak 40 pasien (48,7%) menunjukkan hasil positif IgG spesifik Aspergillus. Adapun hasil positif LD Bio ICT Aspergillus didapatkan pada 35 pasien (42,7%). Sensitivitas dan spesifisitas LD Bio ICT dibandingkan dengan pemeriksaan IgG spesifik Aspergillus adalah 50,0% dan 64,3%, sedangkan nilai duga positif dan negatifnya adalah 57,1% dan 57,5%.

Simpulan: LD Bio ICT dapat digunakan untuk mendiagnosis APK pada pasien bekas TB Paru di fasilitas kesehatan dengan sumber daya terbatas.

.....Background: Chronic pulmonary aspergillosis (CPA) is a common complication following prior pulmonary tuberculosis (TB) causing respiratory sequelae. Although CPA may lead to worse prognosis, it is still underdiagnosed. Serology test such as Aspergillus-specific IgG is the recommended test for CPA diagnosis. However, this diagnostic procedure is time-consuming, require a lot of resources and certain skills, making this procedure not always easy to implement in limited facilities. The LDBio Diagnostic introduced a novel, affordable, and easy to use serology test, LD Bio Immunocromatography Test (ICT). Nevertheless, LD Bio ICT's diagnostic accuracy in Indonesia is still unknown.

Study aims: This study aimed to determine the diagnostic accuracy of LD Bio ICT with Aspergillus-specific IgG as comparison in previous pulmonary TB patients.

Methods: This cross-sectional study was conducted in April 2019 – October 2020. Subject recruitment was done in National Referral Centre Persahabatan Hospital and serological test was conducted in the Parasitology Laboratory, Faculty of Medicine Universitas Indonesia. Eighty two sera of previous pulmonary

TB patients were serologically tested using LD Bio ICT Aspergillus (France) and Aspergillus-specific IgG was tested using Dynamiker ELISA kit. Results of both tests were then compared to determine the diagnostic accuracy of LD Bio ICT.

Results: Of 82 patients met the inclusion criteria, 57 patients (69.5%) were men, the mean age was 51.27 ± 12.55 years old. The BMI median was 18.67 (10.38-31.18). Forty patients (48.7%) showed positive Aspergillus-specific IgG Dynamiker results. Meanwhile, 35 patients (42.7%) showed positive results of LD Bio ICT Aspergillus. Compared to this finding, LD Bio ICT sensitivity and specificity were 50.0% and 64.3% respectively. In addition, the positive and negative prediction value of LD Bio ICT in this study were 57.1% and 57.5%.

Summary: LD Bio ICT is useful for the diagnosis of CPA in previous pulmonary TB patients in resource-limited settings.