

## Hasil pemeriksaan lateral flow assay (LFA) cryptococcus dikaitkan dengan profil klinis pasien kanker paru di RSUP Persahabatan = Cryptococcal lateral flow assay (LFA) results associated with clinical profiles of lung cancer patients at Persahabatan Hospital, Jakarta.

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### Abstrak

Latar belakang: Kanker paru menduduki peringkat ketiga sebagai penyebab kematian utama akibat keganasan di Indonesia, 85% di antaranya adalah kanker paru karsinoma bukan sel kecil (KPKBSK). Pasien kanker paru rentan terhadap infeksi oportunistik, termasuk kriptokokosis, yaitu infeksi jamur *Cryptococcus*. Penelitian tentang data klinis dan keberadaan *Cryptococcus* pada pasien KPKBSK di Indonesia masih terbatas. Salah satu metode untuk mendeteksi keberadaan *Cryptococcus* adalah pemeriksaan serologi Lateral Flow Assay (LFA).

Tujuan: Penelitian ini bertujuan untuk mengetahui profil klinis pasien KPKBSK dan kaitannya dengan hasil pemeriksaan LFA *Cryptococcus* di RSUP Persahabatan.

Metode: Penelitian dengan disain potong lintang ini dilakukan pada pasien KPKBSK yang belum dikemoterapi di RSUP Persahabatan yang memenuhi kriteria inklusi. Data klinis pasien diperoleh dari anamnesis dan pemeriksaan fisik yang diambil dari rekam medis, selanjutnya dilakukan pemeriksaan LFA *Cryptococcus* di laboratorium Parasitologi FKUI.

Hasil: Dari 77 subjek yang memenuhi kriteria inklusi, terdapat 48 (62,3%) pasien laki-laki, dengan rerata usia 59,4 tahun. Data klinis lain menunjukkan IMT 18,5-22,9 kg/m<sup>2</sup> (53,2%), status tampilan 1 (42,9%), perokok aktif (61,0%), Indeks Brinkman ringan (42,9%), adenokarsinoma (75,3%), stadium IIIB-IV (79,2%).

Riwayat komorbid yang ditemukan adalah TB (13,0%), asma/PPOK (1,3%), DM (16,9%), dan penyakit lainnya (31,2%). Proporsi hasil pemeriksaan LFA *Cryptococcus* positif adalah 11,7%. Tidak ditemukan hubungan bermakna antara profil klinis dengan keberadaan *Cryptococcus* pada pasien KPKBSK.

Simpulan: Proporsi keberadaan *Cryptococcus* pada pasien KPKBSK yang belum dikemoterapi adalah 11,7%. Profil klinis terbanyak berupa IMT 18,5-22,9 kg/m<sup>2</sup>, status tampilan 1, perokok aktif, Indeks Brinkman ringan, jenis keganasan adenokarsinoma, dan stadium IIIB-IV. Riwayat komorbid meliputi TB, asma/PPOK, DM, dan penyakit lain. Tidak ditemukan hubungan antara profil klinis dengan keberadaan *Cryptococcus* pada subjek penelitian.

.....Background: Lung cancer is the third of leading cause of death due to malignancy in Indonesia. Eighty-five percent of them were non-small cell lung cancer (NSCLC). Lung cancer patients are prone to have the opportunistic infections, such as cryptococcosis. However, the clinical data on the existence of *Cryptococcus* in NSCLC patients in Indonesia are scarce. One of the methods to detect *Cryptococcus* in those patients is the Lateral Flow Assay (LFA) serology test.

Aim: The study aimed to determine the association between the clinical profile of NSCLC patients with the Cryptococcal LFA test results at Persahabatan Hospital, Jakarta.

Methods: This cross-sectional study was conducted on naïve NSCLC patients at Persahabatan Hospital Jakarta, who met the inclusion criteria. The clinical data were obtained from history taking and physical examination from the medical records. Furthermore, the Cryptococcal LFA serology test was conducted at

laboratory of Parasitology Department, Faculty of Medicine Universitas Indonesia.

Results: Of the 77 subjects, there were 48 male patients (62.3%), and the mean age was 59.4 years old. The most common clinical profile of NSCLC patients were BMI of 18.5-22.9 kg/m<sup>2</sup> (53.2%), performance status 1 (42.9%), active smokers (61.0%), mild Brinkman Index (42.9%), adenocarcinoma (75.3%), and cancer stage of IIIB-IV (79.2%). The comorbidities of those patients were TB (13.0%), asthma/COPD (1.3%), DM (16.9%), and other diseases (31.2%). The proportion of positive Cryptococcal LFA test results was 11.7%. There was no significant association between the clinical profiles and the presence of Cryptococcus.

Conclusion: The proportion of the Cryptococcus existence in naïve NSCLC patients was 11.7%. The most common clinical profiles were BMI of 18.5-22.9 kg/m<sup>2</sup>, performance status 1, active smokers, mild Brinkman Index, adenocarcinoma histology type, and lung cancer stage at IIIB-IV. The comorbidities of those patients were TB, asthma/COPD, DM, and other diseases. No association was found between the clinical profile of those patients and the presence of Cryptococcus.