

Peranan interferon-gamma release assay metode enzimelinked immunospot untuk deteksi tuberkulosis pleura = The use of interferon-gamma release assay using enzimelinked immunospot method in the diagnosis of tuberculous pleurisy

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Abstrak

Pendahuluan. Pengelepasan interferon-gamma oleh limfosit T yang antigenspecific akan meningkat setelah sel tersebut dipaparkan kembali dengan antigen tuberkulosis (TB) secara in vitro, khususnya apabila sel tersebut berasal dari lokasi infeksi TB aktif. Penelitian ini merupakan uji diagnostik pemeriksaan interferon-gamma release assay (IGRA) metode enzyme-linked immunospot (ELISPOT), yaitu T-SPOT.TB®, untuk deteksi TB pleura menggunakan spesimen sel mononuklear (MN) cairan pleura.

Metode. Sebanyak 48 pasien efusi pleura terduga TB dengan karakteristik cairan pleura eksudatif berdasarkan kriteria Light dan dominasi sel MN lebih dari 50% dilakukan pemeriksaan T-SPOT.TB, biakan TB media cair Mycobacterial Growth Indicator Tube (MGIT), dan aktivitas adenosine deaminase (ADA) cairan pleura.

Hasil. Dengan baku emas biakan TB MGIT didapatkan nilai sensitivitas 100%, spesifisitas 20%, nilai prediksi positif (NPP) 20%, dan nilai prediksi negatif (NPN) 100%. Dengan baku emas kombinasi biakan TB MGIT dan aktivitas ADA didapatkan nilai sensitivitas 100%, spesifisitas 88,89%, NPP 97,5%, dan NPN 100%.

Kesimpulan. IGRA metode ELISPOT menggunakan spesimen cairan pleura merupakan pemeriksaan yang cepat dan bermanfaat sehingga dapat dipertimbangkan sebagai pemeriksaan tambahan pada pasien efusi pleura terduga TB.

.....**Introduction.** The release of interferon-gamma by antigen-specific T lymphocytes increases after rechallenge with tuberculosis (TB) antigen in vitro, especially at a localized site of TB infection. This study aimed to evaluate the diagnostic value of a commercial enzyme-linked immunospot (ELISPOT) assay for interferon-gamma, T-SPOT.TB®, in the diagnosis of TB pleurisy using pleural fluid mononuclear cells.

Methods. 48 subjects, presumed to have pleural TB with exudative pleural effusion by Light's criteria, dominated by mononuclear cells, had their pleural fluid specimen tested with T-SPOT.TB, TB Mycobacterial Growth Indicator Tube (MGIT) culture, and pleural fluid adenosine deaminase (ADA) activity.

Results. The sensitivity, specificity, positive and negative predictive values of the assay were 100%, 20%, 20%, 100%, respectively, if TB MGIT culture was used as the gold standard, and 100%, 88,89%, 97,5%, 100%, respectively, if TB MGIT culture and ADA activity of pleural fluid were used as the gold standard.

Conclusion. The ELISPOT assay for interferon-gamma is useful and rapid so it can be considered as a supplementary test to explore TB pleurisy.