

Hubungan uji tuberkulin dan polymerase chain reaction dengan BTA mikroskopis dan biakan mycobacterium tuberculosis dalam diagnosis tuberkulosis paru = Correlation of tuberculosis skin testing and PCR with AFB microscopic and conventional culture for the diagnosis pulmonary tuberculosis

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Abstrak

Penyakit TB masih merupakan masalah kesehatan masyarakat yang penting di Indonesia. Upaya diagnostik TB paru masih terus ditingkatkan. Pemeriksaan penunjang diagnosis TB yang sekarang digunakan masih mempunyai sensitiviti dan spesitiviti yang rendah. Tujuan penelitian mengetahui tingkat akurasi uji tuberkulin dan PCR terhadap penegakkan diagnosis TB serta hubungan uji tuberkulin dan PCR dengan BTA mikroskopis dan biakan M. Tb dalam diagnosis TB paru.

Metode penelitian cross-sectional, uji diagnostik dan analisa data menggunakan Chi-Square. Kriteria inklusi penderita terdapat gejala klinik riwayat batuk 3 minggu disertai atau tanpa batuk darah, nyeri dada, sesak napas dan riwayat minum obat TB dalam jangka waktu kurang dari 1 bulan serta bukan TB (kontrol). Seluruh sampel dilakukan anamnesis, pemeriksaan fisik, lekosit, LEDI/II, foto toraks, uji tuberkulin, PCR, BTA mikroskopis 3X dan biakan M. Tb metode kudoh. Baku emas yang digunakan biakan M. Tb metode kudoh. Data diolah menggunakan SPSS versi 11.00.

Berdasar 127 sampel masuk kriteria inklusi 121. Sampel berjumlah 121 terdiri dari 61 sampel tersangka TB dan 60 sampel kontrol Sensitiviti dan spesivisiti uji tuberkulin terhadap biakakn metode Kudoh menggunakan cut-off point 15,8 mm 33% dan 93%. Sensitiviti PCR terhadap biakab metode Kudoh 100%, spesitiviti PCR 78%. Didapatkan perbedaan bermakna dan hubungan lemah uji tuberkulin dengan biakan M. Tb dan PCR serta didapatkan perbedaan dan hubungan bermakna PCR dengan BTA mikroskopis biakan M. Tb.

Kesimpulan basil keseluruhan penelitian mendapatkan basil 39 sampel biakan positif, 36 sampel BTA mikroskopis positif, 57 sampel PCR positif dan 18 sampel uji tuberkulin positif. Ditemukan sensitiviti basil uji tuberkulin lebih rendah daripada PCR, BTA mikroskopis dan biakan M. Tb metode Kudoh. Meskipun terdapat perbedaan bermakna basil uji tuberkulin pada biakan positif dan negatif, BTA mikroskopis positif dan negatif, serta PCR positif dan negatif, akan tetapi uji tuberkulin (menggunakan cut-off point 15.8 mm) kurang dapat membantu penegakan diagnosis TB paru. Berdasarkan hasil penelitian ditemukan bahwa diantara keempat pemeriksaan penunjang diagnosis TB paru PCR mempunyai nilai sensitiviti dan spesitiviti tinggi (100% dan 78%). sehingga PCR dapat digunakan sebagai pemeriksaan penunjang diagnosis TB paru apabila didapatkan klinis dan radiology mendukung TB paru. Menggunakan pemeriksaan PCR akan didapatkan metode penegakan diagnosis TB paru yang cepat (1 hari) dibandingkan dengan menunggu hasil biakan M. Tb hingga 8 minggu.

<hr><i>Objective. In an attempt diagnosis pulmonary tuberculosis still increased continuously. Now

additional examination pulmonary tuberculosis have been lack sufficient sensitivity and sensitivities. The aim of this study was to determine the validity of tuberculin skin testing (TST) and PCR toward assessment diagnosis pulmonary of tuberculosis with correlation between tuberculin skin testing to PCR with AFB microscopic and solid media culture of *M. tuberculosis* for the diagnosis of pulmonary tuberculosis.

Method. A cross-sectional study, diagnostic test and analysis with Chi-Square test. Inclusion criteria patient with pulmonary symptom include chronic cough 3 weeks with or without hemoptysis, chest pain, breathlessness and past history of ATA less than 1 month with non-tuberculosis patient (control). The general samples was examination Ro thorax, tuberculin skin testing, PCR, AFB microscopic and conventional culture. The golden standard is conventional culture test using Kudoh method. Analyze of the data with SPSS version 11.0.

Result. The study material comprised 121 samples from 127 samples. These samples include 61 samples from patient with probably active pulmonary tuberculosis and 60 control comprising healthy individuals. The sensitivity and specificity of tuberculin skin testing with cut-off point 15.8 mm greater was 33% and 93% on conventional culture test using Kudoh method. PCR sensitivity was 100% and spesitivity was 78%. It was showed the positivity correlation between pulmonary tuberculosis and conventional culture as well as PCR and AFB microscopic, the conventional culture test.

Conclusion. The sensitivity of tuberculin skin testing less than PCR, AFB microscopic and conventional culture test. So that not enough to assessment diagnosis pulmonary tuberculosis. The sensitivity and specificity PCR was I00% and 78%. With the use of PCR test, we were able to detect diagnosis pulmonary tuberculosis more rapidly in less than I day, compared to average 8 week required for detection by conventional culture.</i>