

Perbandingan gambaran radiografi toraks dengan hasil tes cepat genxpert mtb/rif pada pasien tersangka tb paru bta negatif =  
Comparison study of chest radiograph and rapid genxpert mtb rif test among pulmonary tb suspected patients with negative sputum smear

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Abstrak

Latar Belakang dan Tujuan: Prevalensi tuberkulosis di Indonesia menduduki peringkat kedua terbanyak setelah India dan peran diagnosis cepat serta akurat sangatlah penting. Sejak tahun 2014 pemeriksaan laboratorium berbasis amplifikasi asam nukleat GenXpert MTB/RIF telah diadopsi dalam pedoman nasional penanggulangan TB paru BTA negatif karena dalam 2 jam dapat lebih akurat mendeteksi basil tahan asam dibandingkan dengan apusan sputum BTA konvensional. Harga yang mahal dan ketersediaan yang terbatas membuat perlunya alternatif lain untuk pemeriksaan ini. Penelitian ini bertujuan untuk membandingkan gambaran radiografi toraks GenXpert MTB/RIF pada pasien tersangka TB paru BTA negatif.

Metode: Uji komparasi dengan pendekatan potong lintang membandingkan gambaran radiografi toraks tipikal, atipikal dan bukan TB pada 44 subyek dengan hasil GenXpert MTB/RIF positif dan negatif 22 subyek per kelompok. Analisis berdasarkan adanya komorbiditas HIV, DM, terapi immunosupresan jangka panjang juga dilakukan.

Hasil: Terdapat kesesuaian antara gambaran radiografi toraks dengan hasil pemeriksaan genXpert MTB/RIF pada subyek dengan BTA sputum negatif, dengan nilai kappa 0,59 moderate, sensitivitas 81,8 dan spesifisitas 77,3, yang menguat pada kelompok tanpa komorbiditas kappa 0,711; sensitivitas 87,5, spesifisitas 83,3, serta berkurang pada kelompok dengan komorbiditas kappa 0,464; sensitivitas 81,8 ; spesifisitas 71,4. Lesi radiografi toraks pada kelompok subyek dengan genXpert positif terbanyak adalah infiltrat lapangan atas paru 77,3, nodul 40,9, kavitas 36,4, secara statistik signifikan dengan  $p < 0,05$ .

Kesimpulan: Jika dibandingkan dengan GenXpert MTB/RIF, radiografi toraks memberikan sensitivitas dan spesifisitas yang baik, sehingga dapat dijadikan alternatif modalitas diagnosis yang lebih murah, terutama di daerah perifer Indonesia.

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Background and Purpose: Indonesia's tuberculosis prevalence is currently ranked second highest in the world after India. Therefore, the role of fast and accurate diagnosis is very important. After 2014, a nucleic acid amplification test GenXpert MTB RIF is implemented for negative sputum smear tuberculosis, due to its ability to diagnose tuberculosis within 2 hours with higher accuracy compared to conventional smear. Due to its high cost and lack of availability, an alternative for diagnostic tools should be sought. This study objective is to compare chest radiography using WHO ISTC criteria based on typical and atypical lesion, with GenXpert MTB RIF on subjects who are suspected tuberculosis, with negative sputum smear.

Methods: Comparative cross sectional study to compare chest radiography using WHO ISTC criteria based on typical and non typical TB among 44 subjects suspected tuberculosis infection with negative sputum smear, among groups with positive and negative GenXpert each 22 subjects. Analysis is also performed on subjects with and without comorbidities HIV, DM, long term immunosuppressive therapy.

Results: We found moderate agreement with kappa value 0,59 moderate, sensitivity 81,8 and specificity

77,3, and showing increased value in group without comorbidities kappa 0,711 sensitivity 87,5, specificity 83,3, and decreased value in group with comorbidities kappa 0,464 sensitivity 71,4 specificity 75.

Radiographic lesions most frequently found in positive GenXpert group are upper field infiltrate 77,3, nodules 40,9, and cavities 36,4, with greater proportion compared with negative group, and statistically significant  $p < 0,05$ .

Conclusion: Compared with GenXpert MTB RIF, chest radiography shows good sensitivity and specificity, so it is still potential as cost effective diagnostic modality especially in peripheral areas in Indonesia.