

Xpert MTB/RIF® como herramienta diagnóstica en una cohorte de niños menores de 15 años con sospecha clínica de tuberculosis pulmonar en un hospital de alta complejidad de Medellín

Santiago León Atehortúa Muñoz^a, Jonathan Rendón Muñoz^b, Sandra Viviana Cárdenas Moreno^b, Catalina Arango Ferreira^{a,c}, José William Cornejo Ochoa^c

Resumen

Introducción: La tuberculosis (TB) en niños posee limitaciones en la confirmación microbiológica. Por su naturaleza paucibacilar y la dificultad para obtener muestras microbiológicas adecuadas, la positividad de cultivos es baja.

En adultos, la prueba Gene Xpert MTB/RIF® ha mostrado utilidad por su buen rendimiento, rapidez de resultados y facilidad en su realización. La Organización Mundial de la Salud (OMS) recomienda el empleo de esta prueba en niños, sin embargo, los datos de esta prueba en nuestro medio son limitados.

Objetivo: Estudio de cohorte retrospectivo para describir nuestra experiencia con la prueba Gene Xpert MTB/RIF en menores de 15 años hospitalizados en un centro de alta complejidad con sospecha de TB pulmonar.

Método: Se revisaron 116 historias clínicas con resultados disponibles de Xpert MTB/RIF en muestras respiratorias tomadas entre junio de 2012 y diciembre de 2013. Se excluyeron 33 casos. Los 83 pacientes incluidos se clasificaron como: TB confirmada 8 (10%), probable 16 (19%) y descartada 59 (71%) según criterios de la OMS. El análisis estadístico se realizó en SPSS 20 y EpiDat 3.1.

Resultados: Xpert MTB/RIF mostró para TB confirmada una sensibilidad del 50%, especificidad 96% y valores predictivos positivos y negativos del 57,14 y 94,7%, respectivamente. Al evaluarla en el total de niños que ameritaron inicio de tratamiento (TB confirmada y probable), la sensibilidad fue del 29% con especificidad del 100%. Xpert MTB/RIF detectó una cepa resistente a rifampicina.

Conclusión: Xpert MTB/RIF mostró ser útil para el diagnóstico de TB, con una sensibilidad superior a la baciloscopia. Un resultado positivo puede definir el inicio temprano de tratamiento en casos dudosos, confirma el diagnóstico y permite conocer rápidamente si existe resistencia a rifampicina. Un resultado negativo no descarta el diagnóstico ni debe impedir el inicio del tratamiento si cumple con la sumatoria de los otros criterios recomendados por la OMS.

Palabras clave: *Mycobacterium tuberculosis*; Tuberculosis pulmonar; Niños; Técnicas de diagnóstico molecular; Gene Xpert MTB/RIF

Xpert MTB/RIF® as a diagnostic tool in a cohort of children under 15 years of age with clinical suspicion of pulmonary tuberculosis in a hospital of high complexity in Medellín

Abstract

Introduction: Microbiological confirmation of tuberculosis (TB) in children is difficult. Due to its paucibacillary course, the positivity of cultures is low and samples are not easy to obtain.

In adults, Genexpert MTB/RIF is useful for diagnosing TB. It shows good test performance, offers fast results and is a simple technique for laboratory personnel. The World Health Organization (WHO) recommends its use for children, but clinical studies on this age group are scarce.

Objective: This was a retrospective, descriptive cohort study. The purpose of this study was to describe our experience with Gene Xpert MTB/RIF in children younger than 15 years of age with clinical suspicion of pulmonary TB, who were admitted to a high complexity hospital.

Methods: A total of 116 clinical charts with available results of Xpert MTB/RIF in respiratory samples taken between June 2012 and December 2013 were reviewed and of these, 33 were excluded. The 83 included patients were classified according to the WHO criteria into confirmed TB (n = 8; 10%), probable (n = 16; 19%) and no TB (n = 59; 71%). An analysis was performed using SPSS 20 and EpiDat 3.1.

Results: The Xpert MTB/RIF was 50% sensitive and 96% specific, with a positive predictive value of 57.14% and a negative predictive value of 94.7% for children with confirmed TB. When evaluating Xpert MTB/RIF in all children who received TB treatment (confirmed plus probable TB disease) the sensitivity was 29% with 100% specificity. Among our cohort, the Xpert MTB/RIF detected one child with rifampicin resistance.

Conclusions: Xpert MTB/RIF was useful for the diagnosis of TB. A positive result can lead to the early initiation of treatment in doubtful cases. It confirms the diagnosis and quickly reveals rifampicin resistance. A negative result, however, just as with cultures, does not exclude the diagnosis and should not prevent the initiation of treatment, if it is considered needed based on other criteria.

Keywords: *Mycobacterium tuberculosis*; Pulmonary tuberculosis; Child; Molecular diagnostic techniques; Gene Xpert MTB/RIF

a Servicio de Microbiología clínica, Hospital Universitario San Vicente Fundación, Medellín, Antioquia,

b Universidad de Antioquia, Medellín, Antioquia,

c Departamento de Pediatría, Universidad de Antioquia, Medellín, Antioquia,

* Autor para correspondencia.

Correos electrónicos: satehortuamd@gmail.com satehortuamd@hotmail.com (S.L. Atehortúa Muñoz).

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Conflicto de intereses

Los autores manifiestan no tener conflictos de intereses.

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