Overview of recent research papers in childhood tuberculosis

Child and Adolescent Tuberculosis Working Group
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James Seddon
Clinical Senior Lecturer, Imperial College London
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Implementing contact tracing for tuberculosis in Kyrgyz Republic and risk factors for positivity using Quantiferon-TB Gold plus.


BACKGROUND: Effective active case finding (ACF) activities are essential for early identification of new cases of active tuberculosis (TB) and latent TB infection (LTBI). When stratified by age, association with smear positivity disappeared for children below 15 ...

Coeexistence of genital tuberculosis and ovarian serous cystadenofibroma in a young female patient: a case report.

Yang S, Yang Z, Zhang S, Lan T, Yang L.


PMID: 33045892

Polymerase chain reaction for Mycobacterium tuberculosis and acid-fast bacilli culture were positive in biopsies of the fallopian tubes, omentum, and peritoneum. ... During surgery, even if the lesion is similar to a malignant tumor, the surgical approach needs to be cauto ...
child* AND tuberc*
Implementing contact tracing for tuberculosis in Kyrgyz Republic and risk factors for positivity using QuantiFERON-TB Gold plus.


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My biases

• 1126 studies identified on PubMed
• On review of title selected 90 that I thought looked interesting
• Lots of papers on COVID-19+TB and on BCG!!
• Only given 15 minutes this year!!
• Review of abstracts brought down to 22
• PLEASE forgive me if I have not included your paper!!!
• PLEASE forgive me if I do a terrible job of summarising your work in 1 minute!

"A world without bias is too hard. Would you settle for world peace?"
Epidemiology
The age-specific burden and household and school-based predictors of child and adolescent tuberculosis infection in rural Uganda

Carina Marquez, Mucunguzi Atukunda, Laura B. Balzer, Gabriel Chamie, Joel Kironde, Emmanuel Ssemondo, Theodore D. Ruel, Florence Mwangwa, Khai Hoan Tram, Tamara D. Clark, Dalsone Kwarisima, Maya Petersen, Moses R. Kamya, Edwin D. Charlebois, Diane V. Havlir

The risk of tuberculosis in children after close exposure: a systematic review and individual-participant meta-analysis

Leonardo Martinez, Olivia Cords, C Robert Horsburgh, Jason R Andrews, Pediatric TB Contact Studies Consortium
Profiling *Mycobacterium tuberculosis* transmission and the resulting disease burden in the five highest tuberculosis burden countries

Romain Ragonnet, James M. Trauer, Nicholas Geard, Nick Scott and Emma S. McBryde

Children as sentinels of tuberculosis transmission: disease mapping of programmatic data

Kenneth S. Gunasekera, Jon Zelner, Mercedes C. Becerra, Carmen Contreras, Molly F. Franke, Leonid Lecca, Megan B. Murray, Joshua L. Warren and Ted Cohen
Diagnostics
Upfront Xpert MTB/RIF for diagnosis of pediatric TB—Does it work? Experience from India

Aakshi Kalra1, Debadutta Parija1, Neeraj Raizada1, K. S. Sachdeva2, Raghuram Rao2, Soumya Swaminathan3, Ashwani Khanna4, Kamal Kishore Chopra5, M. Hanif6, Varinder Singh6, K. R. Umadevi7, K. N. Sheladia8, Rama Rao9, N. Vasundhara10, Anil S.11, Nirmala A. R.11, Abdul Azeem11, Vijay Chhajlani12, Jyoti Khurana13, N. J. Das14, Bandana Choudhury15, Sreenivas Achuthan Nair16, Shalini Mall1, Rajashree Sen1, Sarabjit Singh Chadha1, Claudia M. Denkinger17, Catharina Boehme17, Sanjay Sarin1

Tuberculosis Diagnosis in Children Using Xpert Ultra on Different Respiratory Specimens

Heather J. Zar1, Lesley J. Workman1, Margarethia Prins1, Linda J. Bateman1, Slindile P. Mbhele2, Cynthia B. Whitman1, Claudia M. Denkinger3,4, and Mark P. Nicol2,5
A three-marker protein biosignature distinguishes tuberculosis from other respiratory diseases in Gambian children

Toyin Togun\textsuperscript{a,b,*}, Clive J. Hoggart\textsuperscript{c,d}, Schadrac C. Agbl\textsuperscript{e,f}, Marie P. Gomez\textsuperscript{a}, Uzochukwu Egere\textsuperscript{g}, Abdou K. Sillah\textsuperscript{a}, Binta Saidy\textsuperscript{a}, Francis Mendy\textsuperscript{a}, Madhukar Pai\textsuperscript{h,i}, Beate Kampmann\textsuperscript{a,b,*}

PEDIATRIC ENDOBRONCHIAL ULTRASOUND-TRANSBRONCHIAL NEEDLE ASPIRATION UNDER CONSCIOUS SEDATION FOR SUSPECTED TUBERCULOSIS IN LONDON

Mirae Park, MBBS, BSc, * Harriet Owles, MBBS, MA, *
Amanda Williams, MBBS, † Bhanu Williams, BM BS, †
Elizabeth Whittaker, MB BCh, *
and Onn Min Kon, MD, FRCP*
Therapeutics
A Randomized Controlled Trial of Isoniazid to Prevent Mycobacterium tuberculosis Infection in Kenyan Human Immunodeficiency Virus–Exposed Uninfected Infants

Sylvia M. LaCourse,1,2,6 Barbra A. Richardson,1,3 John Kinuthia,4,5 A. J. Warr,6 Elizabeth Maleche-Obimbo,7 Daniel Matemo,4 Lisa M. Cranmer,8 Jerphason Mecha,6 Jaclyn N. Escudero,3,9 Thomas R. Hawn,7 and Grace John-Stewart1,10,11

ORIGINAL ARTICLE

Vitamin D Supplements for Prevention of Tuberculosis Infection and Disease

Risk-benefit analysis of tuberculosis infection testing for household contact management in high-burden countries: a mathematical modelling study

Courtney MYuen, James A Seddon, Salmaan Keshavjee, Peter J Dodd

SUCCESSFUL TREATMENT OF A SEVERE VISION-THREATENING PARADOXICAL TUBERCULOUS REACTION WITH INFlixIMAB

FIRST PEDIATRIC USE

Yara-Natalie Abo, MBBS, * Nigel Curtis, PhD, **† † Coen Butters, BMed, * Thomas H. Rozen, MBBS, **† † Ben J. Marais, PhD, § † † and Amanda Gwee, PhD * † †
HIV co-infection
Abacavir Exposure in Children Cotreated for Tuberculosis with Rifampin and Superboosted Lopinavir-Ritonavir

Helena Rabie, Tjokosela Tikiso, Janice Lee, Lee Fairlie, Renate Strehlau, Raziya Bobat, Aafaf Liberty, Helen McIlner, Isabelle Andrieux-Meyer, Mark Cotton, Marc Lallemant, Paolo Denti

Pharmacokinetics and safety of a raltegravir-containing regimen in HIV-infected children aged 2–12 years on rifampicin for tuberculosis

Tammy Meyers, Pearl Samson, Edward P. Acosta, Jack Moye, Ellen Townley, Sarah Bradford, Linda Marillo, Kayla Denson, Laura Hovind, Thucuma Sise, Hedy Teplitz, Sisinyana Ruth Mathiba, Maseboe Masenyi, Anneke Hesseling, Mark F. Cotton, Paul Krogstad, for the IMPAACT P1101 Team
Vaccines
BCG vaccination is associated with reduced malaria prevalence in children under the age of 5 years in sub-Saharan Africa

Prevention of tuberculosis in macaques after intravenous BCG immunization
Potential effect of age of BCG vaccination on global paediatric tuberculosis mortality: a modelling study

Partho Roy, Johan Vekemans, Andrew Clark, Colin Sanderson, Rebecca C Harris*, Richard G White*

Maternal Priming: Bacillus Calmette-Guérin (BCG) Vaccine Scarring in Mothers Enhances the Survival of Their Child With a BCG Vaccine Scar

Mike L.T. Berendsen,1,4 Christian Bjerregård Bland,1,2,4 Pauli Bles,1 Aksel Karl Georg Jensen,2,3 Poul-Erik Kofoed,4 Hilton Whittle,5 L. Charlotte J. de Bree,2,6 Mihai G. Netea,8 Cesario Martins,1 Christine S. Benn,6,9 and Peter Aaby12
Fundamental Science
Infant Alveolar Macrophages Are Unable to Effectively Contain *Mycobacterium tuberculosis*

Anu Goenka1,2, Ian E. Prise1, Emma Connolly1, Paulina Fernandez-Soto1, David Morgan1, Jennifer S. Cavet1, John R. Grainger1, Jaya Nichani3, Peter D. Arkwright4† and Tracy Russell1†

Characterization of gut microbiota in children with pulmonary tuberculosis

Weiran Li1,2, Yu Zhu1,2, Qiong Liao1,2, Zhiling Wang1,2* and Chaomin Wan1,2*
Protection against mycobacterial infection: A case-control study of mycobacterial immune responses in pairs of Gambian children with discordant infection status despite matched TB exposure

Robindra Basu Roy\textsuperscript{a,b,c}, Basil Sambou\textsuperscript{b}, Muhamed Sissoko\textsuperscript{b}, Beth Holder\textsuperscript{a,d}, Marie P Gomez\textsuperscript{b}, Uzochukwu Egere\textsuperscript{b,e}, Abdou K Sillah\textsuperscript{b}, Artemis Koukounari\textsuperscript{f}, Beate Kampmann\textsuperscript{b,c,g,s}

Advanced imaging tools for childhood tuberculosis: potential applications and research needs

Conclusions

• Number of publications increasing, many of high quality
• Lots of BCG papers this year
• Multiple papers on COVID-TB, including in children
• Good geographical variation