TB RESEARCH DISSEMINATION WORKSHOP

Presentation abstracts

June 30 & July 1, 2022

epicentre
ÉPIDÉMIOLOGIE • EPIDEMIOLOGY

MU-JHU CARE LTD
MU-JHU RESEARCH COLLABORATION

Unitaid

ELIZABETH GLASER PEDIATRIC AIDS FOUNDATION

MEDECINS SANS FRONTIERES

Mbarara, June 30, 2022

Hello everyone

Epicentre has been conducting clinical research work for more than 20 years and has extensive experience in TB research. This workshop will provide an opportunity to review the latest studies conducted on tuberculosis by Epicentre and its partners to reduce the burden of this disease in Africa. Among the challenges discussed during this workshop are the under-diagnosis, because many people are unaware that they have the disease, the simplification of models of care and improved care for children and patients living with HIV.

The center is one of the sites of the TB-Speed research project coordinated by Université de Bordeaux, which aims to reduce infant mortality due to tuberculosis. This infectious disease remains one of the main causes of death in children under 5 years of age and most of them die without having access to treatment because they are often not diagnosed. The goal of the TB-Speed project is to identify rapid, effective, and easy-to-use diagnostic tests to improve the diagnosis of TB in children.

The Mbarara Center is also collaborating in international treatment trials to simplify or reduce treatment regimens. The EDCTP and ANRS-funded DATURA trial is comparing the efficacy of more intensive initial treatment of TB with higher doses of the main antibiotics used, rifampicin and isoniazid, plus corticosteroids, in hospitalized adults and adolescents co-infected with HIV and TB versus standard treatment. The STATIS clinical trial studied two innovative strategies aimed at reducing mortality in people living with HIV.

Another challenge in improving patient management and providing faster treatment is the development and evaluation of rapid, easy-to-use tests, that do not require sputum and can be offered as close to the patient as possible. The FujiLAM test appears to be a promising alternative because it is performed on urine, produces results within one hour, and can be performed without a laboratory.

In terms of models of care, Contact study compares the cascade of care between Community based with screening of contacts, decentralized initiation and follow-up of PT in the community by a trained community health worker and Health Facility based for initiation and follow-up of PT for TB screening and management of household TB child contacts.

The workshop will end with a round table on the challenges and opportunities for tuberculosis management in Uganda and more broadly in East Africa. The fight against tuberculosis is indeed far from being won and the COVID-19 pandemic has even set back some of the progress made. We must therefore continue to fight against this terrible disease and pursue studies and research to improve people's lives and hope one day to eradicate this scourge.

I wish you a very nice day,

Juliet Mwanga-Amumpaire
Director Epicentre Mbarara Research Centre

TB research workshop - June 30, 2022

8:00 - 9:00 Welcome & Registration
- Registration Desk

9:00 - 9:20 Opening Ceremony
Master of Ceremony(s): Dan Nyehangane & Angella Nakato Muyingo
- Juliet Mwanga-Amumpaire, Director Epicentre Mbarara Research Centre
- Prof. Celestino Obua, Vice-chancellor Mbarara University of Science and Technology

9:20 - 10:00 Lecture: Landscape of Tuberculosis disease in Uganda: gaps for research
- Dr. Stavia Turyahabwe, Assistant Commissionner, National TB and Leprosy Program Ministry of Health

10:00 - 11:00 TB Diagnostics: New Diagnostic Tools and Algorithms in Adults
Moderator: Dr. Francis Bajunirwe, Mbarara University of Science & Technology
- Diagnostic performance of the novel FujiLAM assay to detect tuberculosis in HIV-positive patients. Helena Huerga
- Feasibility of implementing the FujiLAM assay and acceptability by health workers and patients. Winnie Muyindike
- COVID-19 in HIV Positive Patients Investigated for Tuberculosis in the Context of the FujiLAM Study. Ivan Mugisha Taremwa

11:00 - 11:30 Coffee break

11:30 - 12:45 TB Diagnostics: New Diagnostic Tools and Algorithms in Children
Moderator: Dr. Elias Kumbakumba, Mbarara University of Science and Technology
- Tuberculosis Diagnostic Accuracy Of Stool Xpert MTB/RIF and Urine AlereLAM in Vulnerable Children. Dorah Nampijja
- Evaluation of centrifuge-free stool processing methods combined with Xpert MTB/RIF ultra for diagnosis of intrathoracic paediatric TB. Rodney Kaitano
- TB Diagnostic Algorithm for Children with SAM. Eric Wobudeya
- Validation of the PAANTHER TB Treatment Decision Algorithm for Children Living with HIV. Eric Wobudeya

12:45-14:00 Lunch

14:00 - 15:00 Model of care/approaches to increase pediatric TB detection and reduce the burden of disease
Moderator: Dr. Mary Namubiru, Elizabeth Glaser Pediatric AIDS Foundation
- Increased Child Contact Investigation and Tuberculosis Preventive Treatment Management through a Community-Based Intervention in Cameroon and Uganda: Results of the Contact Cluster Randomized Trial. Daniel Atwine
- CONTACT: Acceptability Study. Anca Vasiliu
- Detect TB. Moorine Sekadde

15:00 - 16:00 Model of care / approaches to increase pediatric TB detection and reduce the burden of disease
Moderator: Dr. Achilles Katamba, Makerere University College of Health Sciences, Kampala, Uganda
- Impact of Systematic TB Detection on Mortality in Children Aged < 5 Years with Severe Pneumonia. Juliet Mwanga-Amumpaire
- Decentralizing Childhood TB Diagnostic Approaches at District Hospital & Primary Health Center Level: Implementation. Naome Natukunda
- Decentralizing Childhood TB Diagnostic Approaches at District Hospital & Primary Health Center Level: Impact. Mastula Nanfuka

18:00 – 20:00 Cocktail Party

TB research workshop - July 1, 2022

8:00 - 9:00 Welcome & Registration
- Registration Desk

9:00 – 10:30 TB chemotherapeutics
Moderator: Dr. Evelyne Tibanauka, World Health Organization Representative on TB in Uganda
- Update on TB treatment shortening chemotherapeutics. Amina Jindani
- Systematic or test-guided treatment for tuberculosis in HIV-infected adults. Conrad Muzoora

10:30 - 11:00 Coffee break

11:00 – 12:30 Round Table: Perspectives and Challenges in TB
Moderator: Prof. Yap Boum II, Africa Representative Epicentre
- Dr. Achilles Katamba; Makerere University College of Health Sciences Kampala, Uganda
- Dr. Stavia Turyahabwe; National TB and Leprosy Program, Ministry of Health, Uganda
- Dr. Maryline Bonnet; Institute of Research for Development (IRD), France
- Dr. Elias Kumbakumba; Mbarara University of Science and Technology, Uganda
- Dr. Carolina Jimenez, Médecins Sans Frontières (MSF), France

12:30 – 13:00 Closure Session
- Dr. Emmanuel Baron; Epicentre General Director
- Dr Henry Mwebesa; Director General Ministry of Health, Uganda

13:00-14:00 Lunch and departure

Lecture

Landscape of Tuberculosis disease in Uganda: gaps for research

- Dr. Stavia Turyahabwe, Assistant Commissionner, National TB and Leprosy Program, Ministry of Health

TB Diagnostics: New Diagnostic Tools and Algorithms in Adults

Moderator: Dr. Francis Bajunirwe, Mbarara University of Science & Technology

- Helena Huerga
- Winnie Muyindike
- Ivan Mugisha Taremwa

Diagnostic performance of the novel FujiLAM assay to detect tuberculosis in HIV-positive patients

Helena Huerga, Epicentre, France

Background

The novel urine-based point-of-care FujiLAM assay is a promising tool for tuberculosis (TB) diagnosis. We prospectively assessed the diagnostic accuracy of FujiLAM and we compared it to the WHO-recommended Abbott TB-LAM assay in people living with HIV (PLHIV) in Uganda, Kenya, Mozambique, and South Africa.

Methods

Diagnostic prospective study including ambulatory HIV-positive individuals (≥15 years) with signs or symptoms of TB irrespective of their CD4 count, and asymptomatic patients with advanced HIV disease. All patients received clinical examination, FujiLAM and Abbott TB-LAM, GeneXpert MTB/RIF Ultra (sputum or urine), culture (sputum) and chest X-ray. Accuracy of the assays was evaluated against a microbiologically reference standard (confirmed TB defined by any positive culture or Xpert Ultra result).

Findings

We included 1575 patients: 1031 Group 1 and 544 Group 2 with median CD4 count 528 cells/μL [IQR: 272-770] and 128 cells/μL [IQR: 66-181], and microbiologically confirmed TB in 12.4% (96/776) and 5.5% (18/330), respectively. The overall sensitivities of FujiLAM and Abbott TB-LAM were respectively, 59.6% (95%CI 50.1-68.7) and 40.4% (95CI 31.3-49.9), p-value<0.001. FujiLAM sensitivity was higher than that of Abbott TB-LAM among patients with CD4<200cells/μL, 69.2% (95%CI 56.6-80.1%) and 52.3% (95CI 39.5-64.9), p-value=0.035, respectively, and among patients with CD4≥200cells/μL, 46.9% (95%CI 32.5-61.7) and 24.5% (95CI 13.3-38.9), p-value=0.019, respectively. The specificities of FujiLAM and Abbott TB-LAM were 86.6% (95%CI 84.3-88.7) and 86.4% (95%CI 84.1-88.5) respectively.

Interpretation

This large prospective study shows the higher sensitivity of FujiLAM compared to Abbott TB-LAM, and its potential significant benefit in rapid and simple TB diagnosis of PLHIV.

Feasibility of implementing the FujiLAM assay and acceptability by health workers and patients

Winnie Muyindike, Epicentre Mbarara Research Centre, Uganda

Background
The novel urine-based FujiLAM test identifies tuberculosis in HIV-positive patients but may be challenging to use as a point-of-care (POC) test.

Objectives
We assessed the feasibility and acceptability of using the FujiLAM test at POC in outpatient settings.

Methods
We conducted a mixed methods study in four outpatient settings in Kenya, Mozambique, South Africa, and Uganda between November 2020 and September 2021. The test was performed at POC in existing clinic laboratories and consultation spaces. We performed direct observations in the four health facilities, individual questionnaires, proficiency testing evaluations, and individual interviews among healthcare workers performing the FujiLAM test and group discussions with programme managers.

Results
Overall, 18/19 (95%) healthcare workers and 14/14 (100%) managers participated in the study. Most assessed healthcare workers, including lay health workers (10/11; 91%), met the minimum required theoretical knowledge and practical skill in performing the FujiLAM test. Most healthcare workers (17/18; 94%) found the FujiLAM test overall "*Easy/Very easy*" to perform. Some challenges were mentioned: many timed steps (5/18; 28%); ensuring correct incubation period (5/18; 28%) and test result readability (4/18; 22%). Half of the healthcare workers regularly performing the test (4/7; 57%) found it "*Easy*" to integrate into routine activities. Most healthcare workers and managers believed that any healthcare worker could perform the test after adequate training.

Conclusions
Implementing the FujiLAM test in outpatient POC settings is feasible and acceptable to healthcare workers and managers. This test can be performed easily in various clinic locations by any healthcare worker including lay workers. However, FujiLAM test, being a timed and multi-step test procedure may affect the workload pose some challenges in resource-constrained health facilities.

COVID-19 in HIV-positive patients investigated for tuberculosis in the context of the FujiLAM study

Ivan Mugisha Taremwa, Epicentre Mbarara Research Centre, Uganda

Background

People with immunosuppression may be particularly vulnerable to SARS-CoV-2 and some symptoms of infection by SARS-CoV-2 and TB are similar. Dual infection with both TB and COVID-19 may also lead to poorer treatment outcomes. This study was nested into the FujiLAM study and assessed the prevalence of exposure and infection by SARS-CoV-2 among HIV patients investigated for TB.

Methods

A prospective observational study including HIV-positive patients with symptoms of TB (group 1) and patients with advanced HIV disease and no symptoms of TB (group 2) in Uganda, Kenya, and South Africa. All patients were investigated for TB and were proposed SARS-CoV-2 antibody testing at the first and the 6-month consultation. SARS-CoV-2 PCR was proposed to patients with symptoms of TB at the first consultation and patients with symptoms of Covid-19 at any time during follow-up. Exposure to SARS-CoV-2 was defined by the detection of antibodies, while the infection was determined by PCR.

Findings

In total, 1466 HIV-positive patients included in the FujiLAM study were investigated for SARS-CoV-2 (985 patients in group 1 and, 481 patients in group 2). Of these, 1254 (85.5%) patients consented to SARS-CoV-2 antibody testing (829 in group 1 and 425 in group 2), and 1188 (94.7%) of them had results. Overall, 27.9% (331/1188) of patients had a positive serology result. According to the CD4 count, a positive serology result was found in 22.3% (110/443) of patients with CD4<200, and 31.7% (213/671) of those with CD4>200, p<0.001. Among patients with symptoms of TB who accepted PCR testing, 8.3% (40/483) had PCR positive results, of whom, 12.5% (5/40) had confirmed TB. Finally, among the 40 patients that were PCR positive, 15 (35.7%) were started on TB treatment.

Interpretations

This study reports moderate to high exposure to Covid-19 among patients investigated for TB. Also, it reveals that HIV-positive with CD4<200 have lower Covid-19 serology positivity than those with CD4≥200. This finding may have implications regarding the level of protection for immunosuppressed HIV-positive patients who have passed the disease or for vaccination strategy. Indeed, people living with HIV and with a low levels of CD4 should be prioritized for COVID-19 vaccination.

Moreover, a considerable proportion of Covid-19 infected patients were also diagnosed with TB.

TB Diagnostics: New Diagnostic Tools and Algorithms in children

Moderator: Dr. Elias Kumbakumba, Mbarara University of Science and Technology

- Dorah Nampijja
- Rodney Kaitano
- Eric Wobudeya

Tuberculosis Diagnostic Accuracy Of Stool Xpert MTB/RIF and Urine AlereLAM in Vulnerable Children

Dora Nampijja, Epicentre Mbarara Research Centre, Uganda

Background

Non-sputum-based diagnostic approaches are crucial in children at high risk of disseminated tuberculosis (TB) who cannot expectorate sputum. We evaluated the diagnostic accuracy of stool Xpert MTB/RIF and urine AlereLAM tests in this group of children.

Methods

Hospitalized children with presumptive TB and either age <2 years, HIV-positive or with severe malnutrition were enrolled in a diagnostic cohort. At enrolment, we attempted to collect two urine, two stool and two respiratory samples. Urine and stool were tested with AlereLAM and Xpert MTB/RIF, respectively. Respiratory samples were tested with Xpert MTB/RIF and mycobacterial culture. Both a microbiological and a composite clinical reference standard were used.

Results

The study analyzed 219 children; median age 16.4 months, 72 (32.9%) HIV-positive and 184 (84.4%) severely malnourished. 12 (5.5%) and 58 (28.5%) children had confirmed and unconfirmed TB, respectively. Stool and urine were collected in 219 (100%) and 216 (98.6%) children, respectively. Against the microbiological reference standard, the sensitivity and specificity of stool Xpert MTB/RIF was 50.0% (6/12, 95% CI 21.1–78.9%) and 99.1% (198/200, 95% 96.4–99.9%), while that of urine AlereLAM was 50.0% (6/12, 95% 21.1–78.9%) and 74.6% (147/197, 95% 67.9–80.5%), respectively. Against the composite reference standard, sensitivity was reduced to 11.4% (8/70) for stool and 26.2% (17/68) for urine, with no major difference by age group (<2 and ⩾2 years) or HIV status.

Conclusion

The Xpert MTB/RIF assay has excellent specificity on stool, but sensitivity is suboptimal. Urine AlereLAM is compromised by poor sensitivity and specificity in children.

Evaluation of centrifuge-free stool processing methods combined with Xpert MTB/RIF ultra for diagnosis of intrathoracic paediatric TB

Rodney Kaitano,Epicentre Mbarara Research Centre, Uganda

Background

There is a growing interest for the use of stool samples as an alternative to respiratory samples for the diagnosis of intrathoracic TB in children unable to produce sputum. Unlike respiratory samples, stool samples require processing before molecular testing. Several groups have already evaluated different processing methods. However, it is difficult to know which method has the best diagnostic accuracy and potential for use at Primary Health Care level, due to the difference in study designs and populations.

Methods

In this study, we performed a head to head comparison of the diagnostic accuracy and feasibility of four stool processing methods in the same population using the same study methodology. We selected three centrifuge-free simplified methods (Optimized Sucrose flotation (OSF), Stool Processing Kit (SPK) and Simple One Step (SOS)) and one centrifuge-based method (sucrose flotation) with well documented performance used as comparator. Two stool samples and two respiratory samples were collected from children with presumptive TB the Mbarara Regional Referral Hospital (Mbarara, Uganda), Lusaka University Teaching Hospital (Lusaka, Zambia) and the Arthur Davidson Children Hospital (Ndola, Zambia). Stool samples were split in four identical aliquots and processed with the different processing methods. Reference standard was the bacteriological results from respiratory specimens. Laboratory technicians' perception of the methods was assessed using a self-administered questionnaire at different time points of the study.

Results

Thirty-six children with Ultra or culture positive results from respiratory samples were enrolled to evaluate sensitivity and 140 children with two negative culture results to evaluate specificity of Ultra from stool using the different processing methods. Sensitivity of the different methods ranged between 56% and 69% and specificity was above 95% for all methods. The three centrifuge-free methods were perceived as easy to perform by the laboratory technicians.

Conclusion

Simplifying stool processing, regardless of the method used, did not decrease its performance when compared with the centrifuge-based method. All centrifuge-free methods were feasible and well accepted by laboratory technicians.

Model of care/approaches to increase pediatric TB detection and reduce the burden of disease

Moderator: Dr. Mary Namubiru, Elizabeth Glaser Pediatric AIDS Foundation

- Daniel Atwine
- Anca Vasiliu
- Moorine Sekadde

Increased child contact investigation and tuberculosis preventive treatment management through a community-based intervention in Cameroon and Uganda: Results of the contact cluster randomized trial

Daniel Atwine, Epicentre Mbarara Research Centre, Uganda

Context

In tuberculosis (TB) endemic countries, the screening and management of household contacts remains low including the uptake of TB preventive treatment (TPT). One of the challenges is the necessity for parents to bring children to the health facility for TB screening and TPT initiation. This study evaluated TPT initiation and completion in a community-based intervention compared to the facility-based standard of care among eligible household child contacts in Cameroon and Uganda.

Methods

This is a multicentre cluster randomized controlled trial with twenty TB diagnostic and treatment facilities and catchment areas randomized between intervention and standard of care arms. Bacteriologically confirmed index cases were asked to declare household contacts. The intervention included screening for TB in household contacts by community health care workers with referral of symptomatic child contacts to a facility for TB diagnostic investigations; TPT initiation for child contacts—a negative symptom screen and <5 years irrespective of HIV status or 5-14 years for children living with HIV (CLHIV); and TPT follow-up through home visits. TPT completion was defined as > 90% drug intake within 120 days. We compared the proportion of declared child contacts <5 years or CLHIV (5-14 years) who initiated and completed TPT between the two arms using a generalized linear mixed model.

Results

Between November 2019 and December 2021, a total of 558 and 341 index cases were enrolled in the intervention and standard of care arms, declaring 1,895 and 1,005 child contacts, respectively. Of them, 383 index cases were enrolled in Uganda with a total of 1244 declared child contacts. Of the 941 and 459 potentially TPT eligible declared child contacts (<5 years or CLHIV aged 5-14 years) in the intervention and standard of care arms, 80% initiated and completed TPT in the intervention arm vs 61% in the standard of care arm, respectively.

Conclusion

Scaled-up, community-based interventions have the potential to improve TPT coverage and outcomes among child contacts in resource-limited settings.

Acceptability and feasibility of a household child-contact investigation and preventive therapy management in Cameroon and Uganda

Anca Vasiliu , Epicentre Mbarara Research Centre, Uganda

The CONTACT study (Cameroon, Uganda) is a cluster-randomized trial evaluating a community intervention for tuberculosis contact investigation and tuberculosios preventive treatment management. It includes index case counseling at the facility, community health workers- led home-based child contact screening and tuberculosis preventive therapy monitoring, as well as referral of children with tuberculosis suggestive symptoms or potential side effects.

As part of the impact evaluation of this community-based intervention, we performed a qualitative assessment focusing on the acceptability and feasibility of the intervention by both providers and beneficiaries. We conducted in-depth interviews with 24 healthcare providers and community leaders and 12 focus group discussions with 79 index cases (separated by gender). Transcripts were analyzed using ATLAS.ti version 9.

The facility-based tuberculosis standard of care's limitations included distance, transport costs, and waiting time associated with the workload of limited human resources. The community-based intervention was found acceptable and feasible by all participants. Determinants of acceptability included the index case's counseling and the legitimacy of community health workers. The main drivers of feasibility were community healthc workers' financial motivation, code of conduct, and training, and household visit planning.

The community-based intervention is acceptable and feasible. The combination of home-based child contact screening and tuberculosis preventive therapy management has the potential of preventing the onset of tuberculosis disease in millions of children from high-burden, limited-resource areas.

Detect TB

Moorine Sekadde, Epicentre Mbarara Research Centre, Uganda

No abstract.

Model of care/approaches to increase pediatric TB detection and reduce the burden of disease

Moderator: Dr. Achilles Katamba, Makerere University College of Health Sciences, Kampala, Uganda

- Juliet Mwanga-Amumpaire
- Naome Natukunda
- Mastula Nanfuka

Impact of systematic TB detection using Xpert Ultra on nasopharyngeal aspirates and stool samples on mortality in children with severe pneumonia

Juliet Mwanga-Amumpaire, Epicentre Mbarara Research Centre, Uganda

Background

In children with severe pneumonia, TB is usually considered only in case of prolonged symptoms or antibiotic failure, leading to missed or delayed TB diagnosis. Systematic screening with molecular assays could increase TB case detection and thus reduce child mortality.

Methods

From April 2019 to June 2021, we implemented a stepped-wedge cluster randomized trial in 15 hospitals from 6 high TB incidence countries. Children aged <5 years with WHO-defined severe pneumonia received either the WHO standard of care (SOC) – control arm – or SOC plus Xpert MTB/RIF Ultra (Ultra) on 1 nasopharyngeal aspirate (NPA) and 1 stool sample at hospital admission, followed by immediate treatment if positive – intervention arm. Hospitals were randomly selected to switch from the control to the intervention at 5-week intervals. We assessed the impact of the intervention on 12-week mortality using a generalized linear mixed effect model adjusted on severe acute malnutrition and baseline peripheral oxygen saturation (SpO2).

Results

We enrolled 1401 and 1169 children in the control and the intervention groups, respectively. 71 (5.1 %) and 87 (7.4%) children were initiated on TB treatment in the control and intervention groups, respectively (p=0.012). In the intervention arm, 1007 (97.4%) children had NPA collected, 850 (82.2%) had stool collected, and 24 (2.1%) had positive Ultra on either sample, contributing to 29% microbiological confirmation of TB (24/87). At 12 weeks, 110 (7.9%) and 90 (7.7%) had died (p=0.868) in the control and intervention groups, respectively, and 60 (30%) deaths occurred within 48 hours of admission. The intervention was not associated with decreased mortality [adjusted OR: 0.95 (95%CI 0.58 -1.58)].

Conclusion

Screening with Ultra at the time of admission did not lead to reduced mortality in children with severe pneumonia. High TB treatment initiation and microbiological confirmation rate support the more systematic use of Ultra in this vulnerable group.

Decentralizing Childhood TB Diagnostic Approaches at District Hospital & Primary Health Center Level : Implementation

Naome Natukunda, Epicentre Mbarara Research Centre, Uganda

Under embargo at the time of printing the abstract book.

Decentralizing Childhood TB Diagnostic Approaches at District Hospital & Primary Health Center Level: Impact

Mastula Nanfuka, Epicentre Mbarara Research Centre, Uganda

Under embargo at the time of printing the abstract book.

TB research workshop - July 1, 2022

Day 2

TB chemotherapeutics

Moderator: Dr. Evelyne Tibanauka, World Health Organization Representative on TB in Uganda

- Amina Jindani
- Conrad Muzoora

Lecture

Update on TB treatment shortening chemotherapeutics

- Prof. Amina Jindani, St George's University of London

Systematic or test-guided treatment for tuberculosis in HIV-infected adults

Conrad Muzoora, Epicentre Mbarara Research Centre, Uganda

Background

In regions with high burdens of tuberculosis and human immunodeficiency virus (HIV), many HIV-infected adults begin antiretroviral therapy (ART) when they are already severely immunocompromised. Mortality after ART initiation is high in these patients, and tuberculosis and invasive bacterial diseases are common causes of death.

Methods

We conducted a 48-week trial of empirical treatment for tuberculosis as compared with treatment guided by testing in HIV-infected adults who had not previously received ART and had CD4+ T-cell counts below 100 cells per cubic millimeter. Patients recruited in Ivory Coast, Uganda, Cambodia, and Vietnam were randomly assigned in a 1:1 ratio to undergo screening (Xpert MTB/RIF test, urinary lipoarabinomannan test, and chest radiography) to determine whether treatment for tuberculosis should be started or to receive systematic empirical treatment with rifampin, isoniazid, ethambutol, and pyrazinamide daily for 2 months, followed by rifampin and isoniazid daily for 4 months. The primary end point was a composite of death from any cause or invasive bacterial disease within 24 weeks (primary analysis) or within 48 weeks after randomization.

Results

A total of 522 patients in the systematic-treatment group and 525 in the guided-treatment group were included in the analyses. At week 24, the rate of death from any cause or invasive bacterial disease (calculated as the number of first events per 100 patient-years) was 19.4 with systematic treatment and 20.3 with guided treatment (adjusted hazard ratio, 0.95; 95% confidence interval [CI], 0.63 to 1.44). At week 48, the corresponding rates were 12.8 and 13.3 (adjusted hazard ratio, 0.97 [95% CI, 0.67 to 1.40]). At week 24, the probability of tuberculosis was lower with systematic treatment than with guided treatment (3.0% vs. 17.9%; adjusted hazard ratio, 0.15; 95% CI, 0.09 to 0.26), but the probability of grade 3 or 4 drug-related adverse events was higher with systematic treatment (17.4% vs. 7.2%; adjusted hazard ratio 2.57; 95% CI, 1.75 to 3.78). Serious adverse events were more common with systematic treatment.

Conclusion

Among severely immunosuppressed adults with HIV infection who had not previously received ART, systematic treatment for tuberculosis was not superior to test-guided treatment in reducing the rate of death or invasive bacterial disease over 24 or 48 weeks and was associated with more grade 3 or 4 adverse events.

Round table

Perspectives and Challenges in TB

Moderator: Prof. Yap Boum II, Africa Representative Epicentre

- Dr. Stavia Turyahabwe; National TB and Leprosy Program, Ministry of Health, Uganda
- Dr. Carolina Jimenez, Médecins Sans Frontières (MSF), France
- Dr. Elias Kumbakumba; Mbarara University of Science and Technology, Uganda
- Dr. Achilles Katamba; Makerere University College of Health Sciences Kampala, Uganda
- Dr. Maryline Bonnet; Institute of Research for Development (IRD), France

Contact et plus d'informations sur :

www.epicentre.msf.org epimail@epicentre.msf.org

Epicentre_MSF msf-epicentre Epicentre - MSF