COVID-19 and TB co-infection in suspected tuberculosis cases

Sagna T¹ Zoungrana A² Compaore R¹ Ouedraogo H³ Soubeiga S¹ Djigma F² Traore L² Zoure A¹ Zida S³ Zohoncon T² Kambire D³ Ouedraogo O³ Simpore J²

¹Institut de Recherche en Sciences de la Santé (IRSS), Ouagadougou, Burkina Faso, Laboratoire de Biologie moléculaire et de génétique (LABIOGENE), Ouagadougou, Burkina Faso, ²Laboratoire de Biologie moléculaire et de génétique (LABIOGENE), Ouagadougou, Burkina Faso, ³Institut de Recherche en Sciences de la Santé (IRSS), Ouagadougou, Burkina Faso

The Global Health Network

Published on: Jun 16, 2023
DOI: https://doi.org/10.21428/3d48c34a.c1a83c36
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Introduction: The route of transmission and clinical signs of COVID-19 disease are almost similar to those of tuberculosis. In this study we investigated the *Mycobacterium tuberculosis* SARS-CoV-2 co-infection, an aspect not yet investigated in Burkina Faso and very little documented in the world.

Methodology: This is a cross-sectional, which took place from May 18 to October 18, 2021. PCR detection (GeneXpert) of *Mycobacterium tuberculosis* (*Mtb*) from sputum samples, anti-SARS-CoV-2 serology from blood, PCR detection (QuantStudio5) of SARS-CoV-2 from nasopharyngeal samples were performed for consenting participants.

Results: At the end of the analyses, sixty-five (65) patients were positive for tuberculosis (27.54%). The frequency of *Mtb* resistance to rifampicin was 9.23%. The patients with suspected tuberculosis who agreed to be tested for SARS-CoV-2 were 29 (out of 236), i.e. an acceptance rate of 12.29% and a refusal rate of 87.71%. The PCR results for SARS-CoV-2 were all negative. For COVID-19 serology, the prevalence of TB/COVID-19 co-infection was 12.5%.

Conclusion: This study showed that TB/COVID-19 co-infection is a reality in Burkina Faso and that the need for a survey on hesitancy to voluntary testing should be addressed.