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targets. RT-PCR assay amplified even at a concentration of 5 ng/μl and could detect ten copies and one copy of RNA targeting *RdRp* and *N* gene, respectively. RT-PCR amplified products were visually detected by the naked eye and further verified by agarose gel electrophoresis. Primers used for the RT-PCR assay showed zero percent mismatch with SARS-CoV-2 sequences and mismatch with other viruses.

**Conclusion:** The RT-PCR assay developed in this study could be considered a good alternative to the RT-qPCR assays.

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**Tuberculosis and COVID 19: An epidemic submerged in the pandemic: A case series from Eastern India**

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**Purpose:** The COVID-19 pandemic caused by the novel SARS-CoV-2 has spread globally causing over eighteen million positive cases and about half-a-million deaths. During the ongoing pandemic, TB diagnosis might be missed or delayed due to similar clinical presentation. While TB-COVID 19 co-infection is uncommon and might be purely incidental; a higher mortality of 12.3% in cases of co-infections is alarming especially in patients with co-morbidities. With resources being diverted towards COVID and fear of handling sputum, TB control has spiralled to what it was a decade ago. Here we are reporting a case series of SARS-CoV- TB co-infection from Eastern India.

**Methods & Materials:** Nasal swab was collected for the diagnosis of COVID -19 and RT-PCR done for the suspected cases. Sputum/pleural tissue samples were collected from hospitalised suspected patients who did not improve clinically or developed atypical radiological picture and were subjected to staining, Xpert MTB/Rif assay (CBNAAT). Samples that were positive for acid fast bacilli (AFB) and MTB DNA by CBNAAT were considered as Mycobacterium tuberculosis complex.

**Results:** There were four cases of SARS-CoV 2–TB co-infection from our hospital. Two patients presented with COVID-19 before the diagnosis of TB, one with both infections occurring in same week, and one patient with TB followed by COVID-19.

**Table**  
Demographic characteristics and Outcomes of patients with TB & COVID-19 co-infection

Details	Case-1	Case-2	Case-3	Case-4
Age/ Sex	50/Male	30/Female	65/Female	70/Male
Co-morbidities	Type 2 diabetes, renal transplant	Perforation peritonitis	None	None
COVID Status	Moderate	Severe	Severe	Severe
Outcome	Patient on ATT	Patient on ATT	Patient died	Patient on ATT

**Conclusion:** We screened the admitted patients who didn't improve clinically and having atypical radiographic pictures. As both the diseases have respiratory symptoms predominantly, but TB takes longer time to develop we might have missed many patients with tuberculosis. It is important to screen patients of TB for COVID 19 and not to miss the possibility of coexistence of both diseases, especially in high-risk individuals.

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**Novel PCR Test to Differentiate Between Infections with SARS-CoV-2, Influenza A and B**

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**Purpose:** Infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) causes COVID-19, a worldwide spreading disease with acute respiratory distress syndrome as one of the major complications. In the early disease stage, COVID-19 cannot be distinguished from influenza based on the clinical symptoms. During viraemia, direct pathogen detection by reverse transcription polymerase chain reaction (RT-PCR) is the diagnostic gold standard. This study evaluated a novel real-time RT-PCR test for fast detection and differentiation of RNA from SARS-CoV-2 and influenza virus types A and B.

**Methods & Materials:** The assays' diagnostic performance was compared to CE-IVD/FDA-EUA-marked reference PCR tests. RNA was extracted from patient samples collected as nasopharyngeal