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Prevalence of redetectable positive SARS-CoV-2 nucleic acid in recovered COVID-19 patients: a systematic review and meta-analysis

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Abstract

Background: The prevalence of positive SARS-CoV-2 nucleic acid in recovered COVID-19 patients has attracted attention. We aimed to investigate the repositive rate of SARS-CoV-2 and the clinical features of discharged COVID-19 patients. Methods: In this systematic review and meta-analysis, we searched PubMed, Embase, Web of Science, China National Knowledge Internet, Wanfang Data, China BioMedical Literature, VIP, and Google Scholar. Fixed or random-effect models were used to determine effect estimates. Results: Eleven studies were included. The pooled positive rate of viral RNA in discharged patients was 11% (95% CI 7-15; I2=90.4%). The median days from discharge to repositivity were 7 to 8 days. Coughing was the most common clinical symptom, occurring in 16% (95% CI 11-20; I2=0%) of patients at readmission. Chest CT and laboratory indicators of positive retest (PR) patients showed significant recovery trends. The prevalence of comorbidities between the PR patients and the negative retest patients were not significant (OR 0.86 [95% CI 0.38–1.95]; p=0.002; I2=76.5%). No close contacts were positive for SARS-CoV-2 RNA. Conclusion: PR patients were uncommon. The repositive result was likely due to the incomplete clearance of virus from a previous disease course. PR patients were less likely to be contagious. However, close monitoring and quarantine after discharge from the hospital are necessary. Registration: The protocol has been registered on PROSPERO, registration ID: CRD42021239650 Keywords: COVID-19, SARS-CoV-2, discharged patients, positive retest rate

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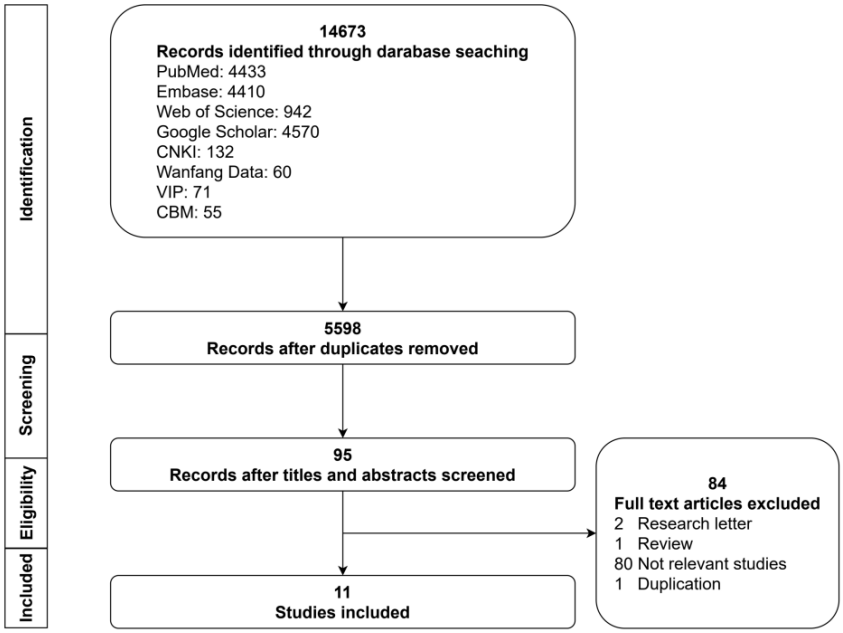

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