







REVIEW ARTICLE

Prevalence, clinical characteristics and outcomes of Guillain–Barré syndrome spectrum associated with COVID-19: A systematic review and meta-analysis

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Abstract

Background and purpose: Mounting evidence supports an association between Guillain–Barré syndrome spectrum (GBSs) and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. However, GBSs in the setting of coronavirus disease 2019 (COVID-19) remains poorly characterized, whilst GBSs prevalence amongst COVID-19 patients has not been previously systematically evaluated using a meta-analytical approach.

Methods: A systematic review and meta-analysis of observational cohort and case series studies reporting on the occurrence, clinical characteristics and outcomes of patients with COVID-19-associated GBSs was performed. A random-effects model was used to calculate pooled estimates and odds ratios (ORs) with corresponding 95% confidence intervals (CIs), compared to non-COVID-19, contemporary or historical GBSs patients.

Results: Eighteen eligible studies (11 cohorts, seven case series) were identified including a total of 136,746 COVID-19 patients. Amongst COVID-19 patients, including hospitalized and non-hospitalized cases, the pooled GBSs prevalence was 0.15‰ (95% CI 0%–0.49‰; $I^2 = 96%$). Compared with non-infected contemporary or historical controls, patients with SARS-CoV-2 infection had increased odds for demyelinating GBSs subtypes (OR 3.27,

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