Supplementary Methods

Complete statistical analysis description

Continuous variables were summarized as median values with interquartile range and categorical variables as absolute numbers and percentages. We compared baseline and outcome variables between coronavirus disease 2019 (COVID-19) patients and COVID-19 negative control group using Pearson's chi-squared test for categorical variables and Mann–Whitney U test for continuous variables. To assess the association of COVID-19 with the primary outcome and secondary procedural outcomes, we used multivariable regression models entering as independent variables the COVID-19 status together with prespecified baseline clinical and radiological variables identified from previous literature as variables known to be associated with the outcomes of interest. These potential confounders were age, sex, National Institutes of Health Stroke Scale (NIHSS); Alberta Stroke Program Early CT Score (ASPECTS), site of arterial occlusion, tandem lesions, last-time-seen-well-to-puncture delay, intravenous thrombolysis (IVT), and general anesthesia. Depending on whether the outcome was ordinal, binary, or continuous, we used ordered logit regression, logistic regression, and quantile regression models, respectively. The results of ordered logit regression and logistic regression model were expressed as odds ratios (OR) and 95% confidence intervals (CI), and the results of quantile regression were expressed as beta coefficients and 95% CIs. Given the risk of clustering effect of patients from the same center, we included the referring center in each model as a cluster level variable and calculated cluster-robust standard errors. To account for missing data of the covariates, we performed multiple imputations by chained equation, generating ten imputed data sets. The rate of missing data for each variable in the registry has been reported in a previous paper. We performed analyses on each imputed dataset, and then the estimates and the standard errors of the ten imputed analyses were combined using Rubins' Rules. To assess collinearity among the covariates in the multivariable models, we calculated the adjusted generalized variance inflation factor for each covariate. Data regarding endovascular treatment (EVT) complications were available for all COVID-19 patients but only in a subset of controls. As such, to evaluate the association between COVID-19 and EVT complications, we performed a 1:3 propensity-score matching procedure between COVID-19 patients and the subset of controls with EVT complication data available. A propensity score model was fitted by logistic regression to assign a probability to each patient belonging to COVID-19 or control groups. Covariates entered in the model were age, sex, baseline NIHSS, large artery atherosclerosis etiology, baseline ASPECTS, site of arterial occlusion, tandem lesions, stroke vascular territory, last-time-seen-well (LTSW)-to-puncture delay, IVT and general anesthesia. Patients in the control group with characteristics most akin to COVID-19 patients were then selected through nearest neighbor matching and for each COVID-19 patient, three control patients with the closest propensity scores were selected. Subsequently, the association between COVID-19 and EVT complications was assessed using univariable binary logistic regression on the matched population and results were expressed as OR and their 95% CIs. All tests were two-sided and *P*-values <0.05 were considered significant. As this was a retrospective study, no correction for multiple outcome testing was applied. We did not perform a power calculation since prior data estimating the expected effect of COVID-19 on the outcome of interest in revascularized stroke patients was lacking. We performed statistical analysis with R statistical software, version 4.0.3 (R Foundation for Statistical Computing, Vienna, Austria).