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MDPI

Table S1. STROBE (Strengthening The Reporting of Observational Studies in Epidemiology) Checklist.

Section and Item	Item No.	Recommendation	Reported on
Title and Abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract.	The study design was specified in the abstract. Page 1.
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found.	Information on the methods and main results was provided in the abstract. Page 1.
Introduction			
Background/Rationale	2	Explain the scientific background and rationale for the investigation being reported.	The scientific background and interest of the study are explained in the introduction. Pages 1, 2.
Objectives	3	State specific objectives, including any prespecified hypotheses.	The objectives are stated in the last paragraph of the introduction. Page 2.
Methods			
Study Design	4	Present key elements of study design early in the paper.	The study design is presented in Methods (2.1). Page 2.
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection.	The setting, locations and relevant dates are described in Methods (2.1). Page 2. Data collection is described in Methods (2.2.). Page 3.
Participants	6	Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls.	The eligibility criteria, as well as the methods of case ascertainment are included in Methods (2.1). Page 2.
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	Variables are detailed in Methods (2.2). Page 3. A complete list of variables and their definitions are provided in Supplementary Material S2.
Data Sources/ Measurement	8	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group.	Data sources are explained in Methods (2.2). Page 3. Assessment methods were the same for every patient.
Bias	9	Describe any efforts to address potential sources of bias.	Selection bias: all (consecutive) cases who met the eligibility criteria were included. Information bias: standard and well-defined variables were used. Confusion bias: statistical analyses were performed adjusting by potential confounders. Page 3.
Study Size	10	Explain how the study size was arrived at.	All available cases were included, there was no size determination.
Quantitative Variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why.	Quantitative variables were presented as such (continuous except for CURB-65 score, which is discrete) and also categorized in the bivariate analysis; they were treated as quantitative in the multivariate analysis.
Statistical Methods	12	(a) Describe all statistical methods, including those used to control for confounding.	(a) Detailed in Methods (2.3). Page 3.
		b) Describe any methods used to examine subgroups and interactions.	(b) We compared subjects with concurrent infection vs. those without (replicating the same multivariate analysis detailed in 2.3 in both subsets of patients) to explore the effect of treatment with azithromycin.
		(c) Explain how missing data were addressed.	(c) Explained in Methods (2.2). Page 3.
		(d) If applicable, explain how matching of cases and controls was addressed.	(d) Not applicable.
		(e) Describe any sensitivity analyses.	(e) Not applicable.
Results			

Participants	13	(a) Report numbers of individuals at each stage of study–eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed. (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram.	(a) Explained in the first paragraph of Results. Page 4. (b) Only one patient was excluded, the reason (age) is provided in Results. Page 4. (c) Not useful in this study.
Participants	14	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders.	(a) Given in Table 1. Pages 5, 6. Distribution of age and sex is detailed in Figure 1. Page 4. Correlation matrices of comorbidities are presented in Figure 2. Page 7.
		(b) Indicate the number of participants with missing data for each variable of interest.	(b) Included in Table 1. Pages 5, 6.
Outcome Data	15	Report numbers in each exposure category, or summary measures of exposure.	Reported in Table 1. Pages 5, 6.
Main Results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included. (b) Report category boundaries when continuous variables were categorized. (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period.	(a) Unadjusted and adjusted estimates, along with their precision are presented in Table 2. Page 10. (b) Reported in Table 1. Pages 5, 6. (c) Not applicable.
Other Analyses	17	Report other analyses done–eg analyses of subgroups and interactions, and sensitivity analyses.	Other analyses (eg survival analysis) are reported in Results (3.1. and 3.2.). Pages 4-9. They are also shown in Figures 2, 3, and 4. Pages 7, 8 and 9, respectively.
		Discussion	
Key Results	18	Summarize key results with reference to study objectives.	Summarized in Conclusions. Page 13.
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias.	Included in Discussion (4.3.). Page 13.
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence.	A comprehensive interpretation of the study results is provided throughout Discussion (4.1. and 4.2.). Pages 10-13.
Generalizability	21	Discuss the generalizability (external validity) of the study results.	Included in Discussion (4.3.). Page 13.
		Other information	
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based.	Included in Funding. Page 13.

Table S2. List of variables and their definitions.

Variable	Definition
Sociodemographic characteristics	
Age	Age at the time of COVID-19 diagnosis, in years
Sex	Considered as binary: male or female
Country of birth	Patients were considered native if they were born in Spain and non-native if not
Place of residence	Living at home, nursing homes (part-time or full time) and institutions for people with disabilities (part-time or full-time)
Dependency in activities of daily living	Patients were considered dependent in activities of daily living if they required a caregiver (formal or informal)
Chronic conditions	
Arterial hypertension	History of arterial hypertension (essential or secondary)
Diabetes	History of type 1 or type 2 diabetes mellitus
Cardiovascular disease	History of coronary artery disease, chronic cardiac insufficiency, venous thromboembolism, cardiac arrhythmia, valvular heart disease or myocardiopathy
Chronic lung disease	History of non-allergic asthma, chronic obstructive pulmonary disease, interstitial lung disease, obstructive sleep apnea syndrome or cystic fibrosis
Chronic obstructive pulmonary disease	History of chronic obstructive pulmonary disease
Non-allergic asthma	History of intrinsic asthma, i.e., triggered by factors other than allergens
Chronic kidney disease	History of chronic kidney disease, defined by signs of kidney damage or by a glomerular filtration rate under 90 ml/min/1.73m^2
Active cancer	Any solid or hematologic malignancy (excluding non-melanoma skin cancer) at the time of COVID-19 diagnosis
History of cancer in the previous five years	History of any solid or hematologic malignancy (excluding non-melanoma skin cancer) in the previous five years, in remission at the time of COVID-19 diagnosis
Autoimmune disease	History of any autoimmune disease (rheumatoid arthritis, inflammatory bowel disease, multiple sclerosis, psoriasis, celiac disease, systemic lupus erythematosus…)
Obesity	Body mass index of 30 and above at the time of COVID-19 diagnosis, in kg/m^2
Tobacco smoking	Status of current tobacco smoker (any number of cigarettes) at the time of COVID-19 diagnosis
History of previous transplantation	History of any previous solid organ or hematopoietic stem-cell transplantation
HIV infection	History of confirmed infection by human immunodeficiency virus (HIV), regardless of the viral load and the CD4+ T-cell count
Treatments received	
Polymedication prior to admission	Patients were considered polymedicated if they usually received six or more different drugs prior to admission
Immunosuppressive therapy prior to admission	Patients were considered medically immunosuppressed if they usually received drugs responsible for high-level immunosuppression (≥20 mg/day of prednisone or equivalent for at least 14 consecutive days, ≥3 mg/kg/day of azathioprine, ≥1.5 mg/kg/day of mercaptopurine, chemotherapy, biologic therapies…)
Hydroxychloroquine	Administration of any dose of hydroxychloroquine to treat COVID-19 during hospital stay
Lopinavir-ritonavir	Administration of any dose of lopinavir-ritonavir to treat COVID-19 during hospital stay
Azithromycin	Administration of any dose of azithromycin to treat COVID-19 during hospital stay
Other antibiotics	Administration of any dose of any antibiotics other than azithromycin to treat COVID-19 during hospital stay
Tocilizumab	Administration of any dose of tocilizumab to treat COVID-19 during hospital stay
High-dose systemic corticosteroids	Administration of corticosteroid boluses or more than 40 mg/day of prednisone or equivalents (e.g., 6 mg/day of dexamethasone) for at least 7 consecutive days to treat COVID-19 during hospital stay
Clinical data	
Abnormal chest X-ray at admission	Abnormal radiographic findings attributable to COVID-19 (ground glass opacities, interstitial thickening, consolidations...) in the first chest X-ray performed within the first 5 days of hospitalisation
Ferritin levels upon admission	Serum ferritin levels in the first blood test performed within the first 5 days of hospitalisation
Acute distress respiratory syndrome	Acute distress respiratory syndrome during hospital stay, according to the 2012 Berlin definition: 1) onset over 7 days or less, 2) radiographic findings consistent with pulmonary oedema, 3) PaO_2/FiO_2 ratio <300 mm Hg receiving positive end-expiratory pressure (PEEP) or continuous positive airway pressure (CPAP) of at least 5 cm H_2O, and 4) not fully explained by cardiac failure or fluid overload
Concurrent infection	Coinfection or superinfection by any pathogen other than SARS-CoV-2 during hospital stay
Need for invasive mechanical ventilation	Need for invasive mechanical ventilation (IMV) was considered when patients were ventilated by orotracheal intubation or by tracheostomy tube

Need for non-invasive mechanical ventilation	Need for non-invasive mechanical ventilation (NIMV) was considered when patients were ventilated by continuous positive airway pressure (CPAP) or bilevel positive airway pressure (BiPAP)
Length of stay	Total length of hospital and intensive care unit (ICU) stay, considering the first hospital and ICU admission, respectively, as well as readmissions due to active SARS-CoV-2 infection (therefore excluding those due to COVID-19 sequelae), in days
CURB-65 Severity score upon admission	Result of the CURB-65 score applied upon hospital admission. It is a five point severity score, one point for each of: confusion, urea >7 mmol/l, respiratory rate ≥30/min, low systolic (<90 mm Hg) or diastolic (≤60 mm Hg) blood pressure and age ≥65 years
Outcomes	
Admission to the intensive care unit	Admission to the intensive care unit at any point during hospital stay
Death	Death due to any cause at any point during hospital stay

Table S3. Cox regression model for in-hospital mortality among all admitted patients.

Variables	Crude HR (95% CI)	*p* value [a]	Adjusted HR (95% CI)	*p* value [a]
Age, years	1.08 (1.06-1.09)	<0.001	1.05 (1.03-1.07)	<0.001
Male sex	1.06 (0.78-1.44)	0.696	1.25 (0.88-1.77)	0.211
Active cancer	2.13 (1.31-3.49)	0.002	2.54 (1.38-4.70)	0.003
CURB-65 score upon admission	2.64 (2.24-3.11)	<0.001	2.03 (1.67-2.47)	<0.001
Azithromycin treatment	0.32 (0.23-0.44)	<0.001	0.49 (0.35-0.70)	<0.001
Non-invasive mechanical ventilation	0.39 (0.22-0.68)	<0.001	0.48 (0.25-0.91)	0.024

CI, confidence interval; CURB-65, prognostic scale based on blood urea nitrogen, respiratory rate, blood pressure and age; HR, hazard ratio. [a] p-value of Wald's test. The concordance index of the model was 0.85.