**Table S1**. General characteristics of COVID-19 fatal cases in different disease severity at admission.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Disease severity at admission\* | | | *P* |
|  | Moderate  (*n*=29) | Severe  (*n*=51) | Critical  (*n*=80) |
| Age, median (IQR), years | 72 (63.5−78.5) | 70 (62−80) | 69 (63.0−74.8) | 0.719 |
| Sex |  |  |  | 0.257 |
| Female, no. (%) | 7 (24.1) | 20 (39.2) | 22 (27.5) |  |
| Male, no. (%) | 22 (75.9) | 31 (60.8) | 58 (72.5) |  |
| Hospital |  |  |  | <0.001 |
| Zhongnan Hospital of Wuhan University(III-A)†, no. (%) | 15 (51.7) | 8 (15.7) | 7 (8.8) |  |
| The First People's Hospital of Jiangxia District(III-B)†, no. (%) | 13 (44.8) | 9 (17.6) | 0 |  |
| Wuhan Third Hospital(III-A)†, no. (%) | 0 | 2 (3.9) | 23 (28.8) |  |
| Union Jiangbei Hospital (II-A)†, no. (%) | 0 | 16 (31.4) | 16 (20.0) |  |
| Wuhan No.7 Hospital (II-A)†, no. (%) | 1 (3.4) | 16 (31.4) | 34 (42.5) |  |
| Smoker |  |  |  | 0.681 |
| Never smoked, no. (%) | 25 (86.2) | 47 (92.2) | 72 (90.0) |  |
| Former smoker, no. (%) | 2 (6.9) | 2 (3.9) | 0 |  |
| Current smoker, no. (%) | 2 (6.9) | 2 (3.9) | 8 (10.0) |  |
| Co-morbidities |  |  |  |  |
| Hypertension, no. (%) | 18 (62.1) | 16 (31.4) | 39 (48.8) | 0.022 |
| Diabetes, no. (%) | 3 (10.3) | 9 (17.6) | 19 (23.8) | 0.274 |
| Coronary heart disease, no. (%) | 5 (17.2) | 9 (17.6) | 16 (20.0) | 0.920 |
| Renal insufficiency, no. (%) | 4 (13.8) | 3 (5.9) | 17 (21.3) | 0.055 |
| Cerebrovascular disease, no. (%) | 4 (13.8) | 6 (11.8) | 7 (8.8) | 0.714 |
| Chronic lung disease, no. (%) | 6 (20.7) | 1 (2.0) | 5 (6.3) | 0.008 |
| Malignant tumor, no. (%) | 2 (6.9) | 4 (7.8) | 5 (6.3) | 0.940 |
| Presence of co-morbidities |  |  |  |  |
| 0, no. (%) | 8 (27.6) | 24 (47.1) | 26 (32.5) | 0.135 |
| 1, no. (%) | 10 (34.5) | 12 (23.5) | 20 (25.0) | 0.529 |
| 2, no. (%) | 5 (17.2) | 10 (19.6) | 21 (26.3) | 0.509 |
| ≥3, no. (%) | 6 (20.7) | 5 (9.8) | 13 (16.3) | 0.384 |
| Surgery history within 6 months, no. (%) |  |  |  |  |
| Signs and symptoms |  |  |  |  |
| Any, no. (%) | 29 (100) | 51 (100) | 77 (96.3) | 0.219 |
| Fever, no. (%) | 22 (75.9) | 38 (74.5) | 66 (82.5) | 0.505 |
| Highest temperature |  |  |  | 0.348 |
| 37.3-38.0℃, no. (%) | 17 (58.6) | 24 (47.1) | 33 (41.3) |  |
| 38.1-39.0℃, no. (%) | 10 (34.5) | 23 (45.1) | 40 (50.0) |  |
| >39.0℃, no. (%) | 2 (6.9) | 4 (7.8) | 7 (8.8) |  |
| Duration of fever, median (IQR), d | 5 (3−10) | 6.5 (4−9) | 7 (5.3−11.0) | 0.078 |
| Cough or sputum production, no. (%) | 17 (58.6) | 33 (64.7) | 59 (73.8) | 0.266 |
| Chest distress/dyspnea, no. (%) | 19 (65.5) | 30 (58.8) | 50 (62.5) | 0.828 |
| Fatigue, no. (%) | 13 (44.8) | 26 (51.0) | 51 (63.8) | 0.139 |
| Nausea or vomiting, no. (%) | 2 (6.9) | 3 (5.9) | 17 (21.3) | 0.022 |
| Diarrhea, no. (%) | 3 (10.3) | 5 (9.8) | 14 (17.5) | 0.386 |

Abbreviations: COVD-19, coronavirus disease 2019; IQR, interquartile range. Denominator used for calculating the percentage may not total number because of missing data.

\*Data were missing for two cases.

†The grade of hospital was indicated in the brackets. The order of grade from the best was Grade III-A, Grade III-B, Grade II-A.



**Figure S1**. Timeline of COVID-19 fatal cases since onset of illness. The appropriate number of cases were given under the corresponding event. CRRT, continuous renal replacement therapy; ECMO, extracorporeal membrane oxygenation; ICU, intensive care unit; IQR, interquartile range.