**Supplementary data**

**Supplementary Table 1.** Comorbidity and dose of corticosteroid among 22 patients with PCR positivity up to 30 days.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number | Days of viral shedding | Age (Years) | Hypertension | Heart diseases | Diabetes | COPD | Chronic hepatitis B | Dose of methylprednisolone or its equivalent, mg/day |
| 1 | 30 | 45 |  |  |  |  | Y | 160 |
| 2 | 30 | 42 |  |  |  |  |  | 80 |
| 3 | 30 | 54 |  |  |  |  |  | 80 |
| 4 | 31 | 64 |  |  |  |  |  | 40 |
| 5 | 31 | 67 | Y |  |  |  |  | N |
| 6 | 32 | 83 |  |  |  | Y |  | 80 |
| 7 | 33 | 59 |  |  |  |  |  | 160 |
| 8 | 34 | 31 |  |  |  |  | Y | 80 |
| 9 | 34 | 50 |  |  |  |  |  | 40 |
| 10 | 35 | 48 |  |  |  |  |  | N |
| 11 | 36 | 40 |  |  |  |  |  | 40 |
| 12 | 36 | 65 | Y |  |  |  |  | 80 |
| 13 | 36 | 59 |  |  | Y |  |  | 80 |
| 14 | 37 | 44 |  |  | Y |  |  | 80 |
| 15 | 37 | 57 |  |  |  |  |  | 80 |
| 16 | 37 | 41 |  |  |  |  |  | 80 |
| 17 | 38 | 64 |  |  |  |  |  | N |
| 18 | 40 | 51 |  | Y |  |  |  | 40 |
| 19 | 41 | 56 | Y |  |  |  |  | 80 |
| 20 | 42 | 38 |  |  |  |  |  | 80 |
| 21 | 43 | 64 |  |  |  |  |  | 80 |
| 22 | 44 | 53 | Y |  |  |  |  | 120 |

Note: Y means that patients have the comorbidity, N means no corticosteroid.

**Supplementary Table 2.** Multivariable analyses of factors associated with prolonged detection of avian influenza A(H7N9) viral RNA among 478 hospitalized patients in China, April 1, 2013 to March 1, 2017.

|  |  |  |
| --- | --- | --- |
| **Variables** | **Adjusted HR** | **p-value\*** |
| **(95% CI)** |
| **Demographic characteristic** |  |  |
| Age | 0.99 (0.99-1.0) | 0.0433 |
| Male | 0.96 (0.81-1.14) | 0.879 |
| Corticosteroid | 0.60 (0.52-0.69) | <0.001 |
| Time from illness onset to antiviral, days | 0.89 (0.87-0.90) | <0.001 |

\*using marginal structural Cox proportional hazards model.Hazard ratio of less than 1 indicates variable increases duration of viral RNA shedding. HR in multivariable analyses was adjusted for age and gender.



**Supplementary Figure 1.** Duration of A(H7N9) viral RNA detection in nasopharyngeal swab (n=64) versus endotracheal aspirate (n=145) specimens



**Supplementary Figure 2.** Log-rank test of the rates of viral RNA positive patients among different NAIs regimens. There was no significant difference (Hazard ratio, 1.18, 95% CI, 0.78-1.79, P=0.43)

**Normal ranges for laboratory chemistries and definitions of abnormal values**

Normal range of White blood cells was 4,000-10,000 per cubic millimeter;

Normal range of Aspartate aminotransferase was less than 40 U/liter;

Normal range of Creatinine was <133 umol/liter;

Normal range of Creatine kinase was <200 U/liter;

Lymphocytopenia was defined as a lymphocyte count <1500 per cubic millimeter;

Thrombocytopenia was defined as a platelet count <150,000 per cubic millimeter;

Abnormal value of PaO2/FiO2 was defined as the proportion <300 mmHg.