**Electronic supplementary material**

**Postextubation Stridor in Severe COVID-19: A Case-Control Study**

**eTable 1: Prevalence of PES in 65 COVID-19 patients and 65 controls matched on a propensity score**

**eTable 2: Detailed steroids use according to COVID-19 status**

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**eTable 4: Comparison of the main characteristics of the cases between COVID-19 waves 1 and 2**

**eTable 1: Prevalence of postextubation stridor (PES) in 65 COVID-19 subjects and 65 controlsa matched on a propensity scoreb**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N (%)** | |  |
|  | **COVID-19 subjetcs**  **n = 65** | **Controls**  **n =65** | ***P* value** |
| Postextubation stridor | 19 (23.3) | 3 (4.62) | <0.001 |
| Female sex | 25 (38.5) | 25 (38.5) | 0.99 |
| Tube mobilization or re-intubation or prone positioning | 37 (56.9) | 37 (56.9) | 0.99 |
| Prolonged mechanical ventilation ≥7 days | 55 (84.6) | 55 (84.6) | 0.99 |
|  |  |  |  |

aThe cases had severe COVID-19 requiring endotracheal mechanical ventilation and the controls were critically ill patients requiring mechanical ventilation for other reasons. Cases were enrolled during two COVID-19 waves in 2020 and controls were enrolled in 2016-2019. Cases and controls were managed in the same intensive care unit.

bThe propensity score used COVID-19 status, female sex, prolonged mechanical ventilation ≥7 days and tube mobilization or re-intubation or prone positioning. Each case was matched individually to one control.

**eTable 2: Detailed steroids use according to COVID-19 status**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **N (%) or Median [Interquartile Range]** | | | | |
|  | **All patients** | **COVID-19 subjects** | | | **Controls** |
| **All COVID-19** | **1st Wave** | **2nd Wave** |
|  | **n=307** | **n=96** | **n=63** | **n=33** | **n=211** |
| Intravenous steroids before extubation | 106 (34.5) | 45 (46.9) | 15 (23.8) | 30 (90.9) | 61 (28.9) |
| Total methylprednisolone duration, days | 10 [6 to 20] | 18 [11.5 to 32] | 20 [11 to 30] | 17 [11 to 33] | 7 [4 to 11] |
| Total methylprednisolone dose, mg | 320 [170 to 540] | 320 [320 to 800] | 800[800 to 800] | 320 [320 to 320] | 240 [107 to 370 ] |
| **Intravenous steroids the days of extubation** | 42 (13.7) | 10 (10.4) | 2 (3.2) | 8 (24.2) | 32 (15.2) |
| **Intravenous steroids within the 48 hours before extubation** | 56 (18.2) | 13 (13.5) | 3 (4.7) | 10 (30.3) | 43 (20.3) |

**eTable 3: Detailed steroids use according to PES occurrence**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N (%) or Median [Interquartile Range]** | |  |
|  | **PES**  **n = 30/307** | **No PES**  **n =277/307** | **P** |
| Intravenous steroids before extubation | 7 (23.3) | 99 (35.7) | 0.18 |
| **Intravenous steroids the days of extubation** | 3 (10) | 39 (14.1) | 0.8 |
| **Intravenous steroids within the 48 hours before extubation** | 5 (16.7) | 51 (18.4) | 0.8 |

**eTable 4: Comparison of the main characteristics of the cases between COVID-19 waves 1 and 2**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N (%) or Median [Interquartile Range]** | |  |
|  | **1st wave**  **n=63** | **2nd wave**  **n=33** | ***P value***b |
| **Demographics** | |  |  |
| Age, years | 62 [55 to 72] | 66 [54 to 72] | 0.99 |
| Female sex | 17 (27.0) | 12 (36.4) | 0.99 |
| **Management before extubation** | | |  |
| Difficult intubationa | 10 (15.9) | 4 (12.1) | 0.99 |
| Tube mobilization or re to intubation or prone positioning | 46 (73.0) | 22 (66.7) | 0.99 |
| MV duration, days | 22 [10.5 to 31.5] | 12 [9 to 29] | 0.99 |
| **Postextubation stridor** | **17 (27.0)** | **5 (15.2)** | 0.99 |
| Intravenous steroids | 15 (23.8) | 30 (90.9) | <0.001 |
| Positive SARS-CoV-2 RT-PCR in tracheal samples on the day of extubation | 20/52 (38.5) | 18/31 (58.1) | 0.99 |
| RT-PCR cycles in patients with  positive SARS-CoV-2 RT-PCR in tracheal samples on the day of extubation | 32.9 [23.5 to 37.0] | 27.5 [23.52 to 32.0] | 0.90 |

MV: endotracheal mechanical ventilation; RT-PCR: real-time polymerase chain reaction; SARS-CoV-2: severe acute respiratory syndrome due to Coronavirus 2

aDifficult intubation: more than two laryngoscopies, Cormack 3 or 4 with standard laryngoscopy

bBonferroni’s correction