

Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study

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Definition:

Critically ill: requiring invasive or non-invasive mechanical ventilation, or having a fraction of inspired oxygen (FiO_2) of $\geq 60\%$

Study population

52 critically ill COVID patients Wuhan Jin Yin-tan hospital from 2019/12/24 to 2020/01/26 (from a pool of 710 confirmed cases)

Results:

- Mean age: 59.7 years (SD 13.3). 27 (52%) were **older than 60 years**.
- 21 (40%) patients had **chronic diseases**, including cerebrovascular diseases in 7 (13.5%) patients, who were all non-survivors.
- The most common symptoms: **fever** (98%), **cough** (77%), **dyspnoea** (63.5%). Six (11%) did not have fever until 2–8 days after the onset of symptoms
- Most patients had organ function damage
 - ARDS 67%
 - acute kidney injury 29%
 - cardiac injury 23%
 - liver dysfunction 29%
 - pneumothorax 2%
 - Requiring ECMO = 11.5%

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- Mean duration from onset of symptoms to radiological confirmation of pneumonia = 5d (IQR 3-7d)
- Median duration from onset of symptoms to ICU admission was 9d
- Median duration from ICU admission to death = 7 (IQR 3–11) days
- 28d mortality rate = $32/52 = 61.5\%$
- Compared with survivors, non-survivors were more likely to develop ARDS (26 [81%] vs 9 [45%])
- Non-survivors were more likely to receive mechanical ventilation (30 [94%] vs 7 [35%]).
- 30 (81%) of 37 patients requiring mechanical ventilation had died by 28 days

Treatment:

Antiviral agents = 44% [Oseltamivir: 18 (35%) patients, ganciclovir 14 (27%), and lopinavir 7 (13.5%).]

Antibacterial agents, = 94%

Glucocorticoids = 58%

Conclusion

1. 28-day mortality rate (65%) of critically ill COVID-19 patients is higher than that previously seen in critically ill patients with SARS and MERS
2. Requiring mechanical ventilation = 71%
3. Incidence of COVID-19 related ARDS = 67%

Clinical course and comparison between survivor and non-survivors

