

Characterization of severe and critical COVID-19 infected individuals outside of Wuhan, China

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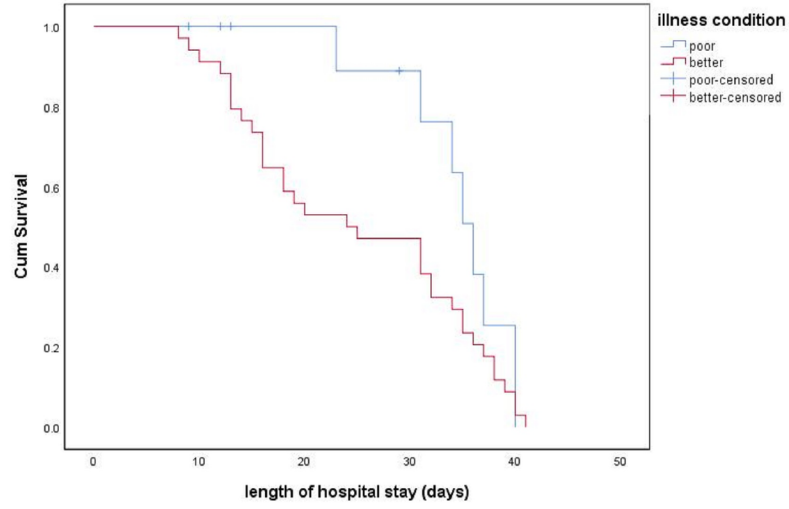
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Abstract

BACKGROUND Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is highly transmissible among people, and the critical cases are still tough to treat, even leading to death. **METHODS** We retrospectively collected the clinical data of all the critical patients admitted to the Three Gorges Hospital (Chongqing, China) from Jan 20, 2020 to Feb 16, 2020, whom were divided into improved group and worsen group. At last, we analyzed and compared the differences in laboratory indexes and length of hospital stay of the two groups. **RESULT** 46 cases were enrolled in the study. Comorbid conditions were present in 25 cases (54.3%). Most cases had symptoms, such as fever, cough, sputum, shortness of breath and dyspnea. The worsen group had a higher APACHE II score of 14 (range from 5 to 23) than improved group (5, range from 3 to 7) ($p < 0.05$). 32 (69.6%) cases had low level lymphocyte counts ($< 1.0 \times 10^9/L$), including 8 (66.7%) worsen group patients and 24 (70.6%) improved group patients. The worsen group was 14.3 (range from 8.21 to 18) with the ratio of neutrophil counts to lymphocyte counts, higher than that in improved group (7.33, range from 4.71 to 14.35) ($p < 0.05$). There were faster respiratory frequencies in worsen group (23, range from 20 to 24.75) ($p < 0.05$). And the worsen group had a lower OI (156.5, range from 74.25 to 233) than the other group (206, range from 177.5 to 242.75) ($p < 0.05$). **CONCLUSIONS** Initial lower lymphocytes and higher APACHE II scores might be relative to the poor prognosis. And most of severe or critical patients had underlying diseases.

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