中文題目：預測新冠肺炎嚴重程度之抽血探討-回溯性分析

英文題目：Increased C-reactive protein, lactic acid dehydrogenase as predictors for severe hypoxemia among patients with COVID-19

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Introduction: The number of COVID-19 patients had increased to 180 million worldwide and severely impacted our healthcare system. Despite previous studies had demonstrated correlations between severity and biomarkers such as C-reactive protein (CRP), lymphocyte, ferritin or procalcitonin, statistical difference was observed when dividing patients in groups: Survived or non-survived. Herein, we made multivariant analysis to identify independent predictors for severe hypoxemia. Potential variables included laboratory biomarkers, clinical, and radiological presentations.

Method: The study included 136 patients who were hospitalized in Wan Fang hospital with polymerase chain reaction (PCR) - confirmed COVID-19 disease. They were stratified into four groups by the required respiratory support as room air (n=45), O2 cannula (n=36), O2 mask (n=26), and mechanical ventilation (n =29); The demographic characteristics, laboratory biomarkers and clinical presentations were compared among these groups

Result: Of 136 patients enrolled in this study, most severe COVID-19 infection were male, older, and with comorbidities; diabetes, dyslipidemia, hypertension and chronic kidney disease are more likely to be found on these patients. Compared with patient required different respiratory support, severe cases showed significantly elevated CRP, LDH, ferritin and D-dimer; Decreased lymphocyte, monocyte and albumin were also discovered in the same group. In multivariate logistic regression analysis, risk factors for disease progression included old age, defined as age > 75 (adjusted odds ratio [AOR], 21.829; 95% CI, 2.908-163.867), alcoholism (AOR, 17.178; 95% CI, 1.73-170.506), and CRP on admission (AOR, 1.148; 95% CI, 1.037-1.271), LDH (AOR, 4.877; 95% CI, 1.677-14.184), which concluded those characteristic should considered as independent predictors for COVID-19 disease progression.

Conclusion: Clinicians should be aware of old age, patient with alcoholism and the serum CRP, D-dimers, ferritin, and LDH, in which might be a predictor of adverse outcome.