عنوان مقاله:

Determination of the Most Important Diagnostic Criteria for COVID-۱۹: A Step forward to Design an Intelligent Clinical Decision Support System

محل انتشار:

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خلاصه مقاله:

Background & Objective: Since the clinical and epidemiologic characteristics of coronavirus disease ۲۰۱۹ (COVID-۱۹) is not well known yet, investigating its origin, etiology, diagnostic criteria, clinical manifestations, risk factors, treatments, and other related aspects is extremely important. In this situation, clinical experts face many uncertainties to make decision about COVID-۱۹ prognosis based on their judgment. Accordingly, this study aimed to determine the diagnostic criteria for COVID-۱۹ as a prerequisite to develop clinical diagnostic models. Materials & Methods: In this retrospective study, the Enter method of the binary logistic regression (BLR) and the Forward Wald method were used to measure the odds ratio (OR) and the strength of each criterion, respectively. P-value<۰.۰۵ was considered as statistically significant for bivariate correlation coefficient. Results: Phi-Crammer's examination test showed that ۱۲ diagnostic criteria were statistically important; measuring OR revealed that six criteria had the best diagnostic power. Finally, true classification rate and the area under receiver operative characteristics curve (AUC) were calculated as ۹۰.۲۵% and ۰.۸۳۵, respectively. Conclusion: Identification of diagnostic criteria has become the standard approach for disease modeling; it helps to design decision support tools. After analyzing and comparing six diagnostic performance measures, we observed that these variables have a high diagnostic power for COVID-۱۹ detection.

کلمات کلیدی:

COVID-۱۹, Coronavirus, Diagnostic criteria, Odds ratio, Regression model