

Effect of herbal compounds on inhibition of coronavirus; A systematic review and meta-analysis

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Abstract

The outbreak of the new coronavirus (COVID-19) has been transferred exponentially. There are many articles that have found the inhibitory effect of plant extracts or plant compounds on the coronavirus family. In this study, we want to use systematic review and meta-analysis to answer the question of which herbal compound can be more effective against the coronavirus. The present study is based on the guidelines for conducting meta-analyzes. An extensive search was conducted in the electronic database, and based on the inclusion and exclusion criteria, articles were selected and data screening was performed. Quality control of articles was performed. Data analysis was carried out in STATA software. The results showed that alkaloid compounds had a good effect in controlling the coronavirus and reducing viral titer. Trypthantrin, Sambucus extract, S. cusia extract, Boceprevir and Indigole B, dioica agglutinin urtica had a good effect on reducing the virus titer but their selectivity index has not been reported and it is recommended to determine for these compounds. Also among the compounds that had the greatest effect on virus inhibition, including Saikosaponins B2, SaikosaponinsD, SaikosaponinsA and Phillyrin, had an acceptable selectivity index greater than 10. Andrographolide showed the highest selectivity index on SARS-COV2, while virus titration and virus inhibition were not reported. The small number of studies that used alkaloid compounds was one of the limitations and it is suggested to investigate the effect of more alkaloid compounds against the coronavirus for verifying its effect.

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