

INPLASY PROTOCOL

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Conflicts of interest:
There is no conflict of interest.

Complementary and alternative therapies for SARS Cov-2: A systematic review

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Review question / Objective: To identify the possible use of complementary and alternative medicines (Traditional Chinese medicine, Ayurvedha, Siddha, Unani, herbal and ethnomedicinal approaches) as a stand-alone modality or in combination with chemoprophylaxis to mitigate the severity, cure or prevent SARS Cov-2, based upon existing reports.

Condition being studied: The total confirmed number of patients infected with highly pathogenic CoVs previously been reported is relatively low (approximately 10,000 cases of both SARS and MERS since 2002). However, COVID-19 is of particular concern due to its number of infected patients were tally up to 7 million and the number of casualties was >400,000 as reported on 01st June 2020. Despite worldwide efforts to contain it, the pandemic is continuing to spread and the USA and Europe being the new epicenters of the virus.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 June 2020 and was last updated on 23 June 2020 (registration number INPLASY202060085).

INTRODUCTION

Review question / Objective: To identify the possible use of complementary and alternative medicines (Traditional Chinese medicine, Ayurvedha, Siddha, Unani, herbal and ethnomedicinal approaches) as a

stand-alone modality or in combination with chemoprophylaxis to mitigate the severity, cure or prevent SARS Cov-2, based upon existing reports.

Rationale: Apart from the strict isolation procedure in China, the role played by

Traditional Chinese Medicine cannot be overlooked in terms of their effective containment of SARS Cov-2. Therefore, It is worth to look at pluralistic approaches than vaccine or chemoprophylaxis alone. Hence we systematically review contemporary approaches in TCM, Ayurveda and other ethnomedicinal approaches along with other promising traditional approaches may use in the containment of SARS Cov-2.

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METHODS

Search strategy: This global search was performed in three bibliographic databases namely, PUBMED, EMBASE, and MEDLINE. The following search terms were used as search terms were used in databases mentioned above (((((severe acute respiratory syndrome coronavirus 2) OR 2019 novel coronavirus) OR 2019-nCov) OR COVID-19) OR SARS-CoV-2) AND Ethnomedicine) OR traditional Chinese medicine) OR TCM) OR Ayurveda) OR Siddha) OR Unani) OR Herbal medicine) OR Complementary medicine) OR Integrative medicine) OR Folk medicine)))))) Filters: From 2019/11/01 to 2020/06/01.

Participant or population: Our study intended to review the population under 4 categories: 1. unexposed asymptomatic (quarantined) 2. Exposed asymptomatic (quarantined) 3. With mild SARS CoV-2 symptoms 4. With moderate to severe SARS CoV-2 symptoms.

Intervention: Since there is no proven therapeutic modality to treat SARS CoV-2

as well as the vaccine development pipeline still underway, pluralistic approach is essential in mitigating the spread of the disease. Since China has already proven the use of TCM to treat the patient, it is worth to investigate on other complementary approaches like thousands years old Ayrvedha, Siddha, Unani or any herbal or ethnomedicinal approaches. Furthermore, we are planing to analyze these alternative therapeutic modalities which have been investigated against previously reported corona-viruses like SARS and MERS. Through this comprehensive analysis we propose how boost the immune system to combat the invasion of virus, what are treatment options suitable during the early stage of the viral infection and the medication could have been use along with chemoprophylaxis to control the medium and severe stages of the infection.

Comparator: Since this is a qualitative analysis the presence of a comparator Not Applicable.

Study designs to be included: The review included original research articles which describes alternative therapeutic modalities against corona viruses.

Eligibility criteria: The review included computational, in vitro, in vivo and clinical studies on ethnomedicine/TCM/Ayurvedha, Siddha, Unani, Herbal, Integrative medicines against SARS CoV, MERS CoV and SARS CoV-2.

Information sources: PUBMED, EMBASE, MEDLINE.

Main outcome(s): Propose alternative therapeutic options to mitigate SARS CoV-2.

Quality assessment / Risk of bias analysis: This has been done through the <https://www.covidence.org> online platform. Briefly; all the citation (3 databases) were uploaded to the software in "RIS" file format followed by the abstract screening by first author and, finally selected studies subjected to full-text screening by 2 authors including

the first author independently to avoid the risk of bias and any disparities were resolved by discussion with the third researcher.

Strategy of data synthesis: We developed a data abstraction spreadsheet using Excel version 2016 (Microsoft Corporation, Redmond, Washington, USA). DNS has conducted the data abstraction for the included full-text articles and the data was independently assessed by all the review authors. We captured the following information; topic, acceptance or rejection of topic, DOI number, and type of ethnomedicinal formula, study group, findings/efficacy of the formula, conclusion, and limitations of the study, remarks, and full text accepts/reject.

Subgroup analysis: Whenever the necessary data are available, subgroup analysis will be done based upon the stage of the infection (asymptomatic, mild, and severe) vs the type of formulation and its effectiveness.

Sensibility analysis: Disparities of the included studies will be resolved upon discussion and the final data set will be selected upon agreement of all authors.

Language: English.

Country(ies) involved: Mainly Asian countries.

Keywords: SARS Cov-2, Ethnomedicine, TCM, Ayrvedha, Herbal medicine, Complementary medicine.

Dissemination plans: Planing to publish in an impact factor journal.

Contributions of each author:

Author 1 - Dulmini Nanayakkara Sapugahawatte - collecting data, writing the article, critical revision of the article and final approval of the article.

Author 2 - Priyanga Dharmaratne - Design, collecting data, writing the article, critical revision of the article, final approval of the article.

Author 3 - Pan Mingfang - collecting data, critical revision of the article, and final approval of the article.

Author 4 - Jun Yang - collecting data, writing the article, critical revision of the article and final approval of the article.

Author 5 - Nannur Rahman - collecting data, writing the article, critical revision of the article and final approval of the article.

Author 6 - Margaret Ip - conception, design, critical revision of the article and final approval of the article.