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Komariah, M.^a, Amirah, S.^b, Maulana, S.^c, Abdurrahman, M.F.^b, Ibrahim, K.^d, Platini, H.^d, Lele, J.A.J.M.N.^e, Kohar, K.^f, Rahayuwati, L.^g, Firdaus, M.K.Z.H.^h

The Efficacy of Herbs as Complementary and Alternative Therapy in Recovery and Clinical Outcome Among People with COVID-19: A Systematic Review, Meta-Analysis, and Meta-Regression

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^a Department of Fundamental Nursing, Faculty of Nursing, Universitas Padjadjaran, Sumedang, Indonesia

^b Undergraduate Medical Education, Faculty of Medicine, Universitas Indonesia, Depok, Indonesia

^c Nursing Internship Program, Faculty of Nursing, Universitas Padjadjaran, Sumedang, Indonesia

^d Department of Medical-Surgical Nursing, Faculty of Nursing, Universitas Padjadjaran, Sumedang, Indonesia

^e Undergraduate Medical Education, Faculty of Medicine, Universitas Kristen Indonesia, Jakarta, Indonesia

^f Clinical Clerkship Program, Faculty of Medicine, Universitas Indonesia, Dr. Cipto Mangunkusumo, Central Hospital, Jakarta, Indonesia

^g Department of Community Health Nursing, Faculty of Nursing, Universitas Padjadjaran, Sumedang, Indonesia

^h Department of Medical-Surgical Nursing, Faculty of Nursing, International Islamic University Malaysia, Kuala Lumpur, Malaysia

Abstract

Background: The COVID-19 pandemic continues, and this condition has caused many cases in various countries around the world, resulting in more than 6 million deaths worldwide. Herbal medicines can act as immunomodulators, anti-inflammatories, antioxidants, antimicrobials, and others depending on the type and content of the herbs used. Previous studies have shown that several types of herbs, such as Echinacea purpurea, Curcumin or Turmeric, Nigella sativa, and Zingiber officinale, have proven their effectiveness as herbal plants for COVID-19. Methods: We conducted a comprehensive literature search through five databases, namely, PubMed, Scopus, Embase, Wiley, and ProQuest to assess the efficacy of phytopharmaceuticals until July 12, 2022. We used the Cochrane RoB 2.0 for the quality assessment of the study. Results: Phytopharmaceuticals significantly improved patients' recovery rate (OR = 3.54; $p < 0.00001$) and reduced deaths (OR = 0.24; $p < 0.0001$) compared to the control group. Phytopharmaceuticals also performed as a protective factor for COVID-19 clinical symptoms, such as dyspnea (OR = 0.42; $p < 0.05$) and myalgia (OR = 0.31; $p = 0.02$) compared to the control group. However, there is no statistically significant effect on cough (OR = 0.76; $p = 0.61$) and fever (OR = 0.60; $p < 0.20$). The results were not affected by patients' covariates [hypertension, diabetes mellitus, and cardiovascular diseases (meta-regression $p > 0.05$)]. Conclusion: Herbal medicine has the potential as an adjuvant therapy in the management of COVID-19. © 2023 Komariah et al. This work is published and licensed by Dove Medical Press Limited.

Author Keywords

adjuvant therapy; COVID-19; herbal medicine; systematic review

Index Keywords

curcumin, herbaceous agent, phytochemical, turmeric; alternative medicine, black cumin, cardiovascular disease, clinical outcome, coronavirus disease 2019, coughing, death, diabetes mellitus, drug efficacy, dyspnea, Echinacea purpurea, fever, ginger, herb, human, hypertension, meta analysis, myalgia, odds ratio, Review, systematic review

Chemicals/CAS

curcumin, 458-37-7; turmeric, 8024-37-1

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Correspondence Address

Komariah M.; Department of Fundamental Nursing, Jl. Raya Bandung-Sumedang KM. 21, Hegarmanah, Jatinangor, Kabupaten, West Java, Indonesia; email: maria.komariah@unpad.ac.id
Amirah S.; Undergraduate Medical Education, Indonesia; email: shakira.amirah@ui.ac.id

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