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Ivermectin for COVID-19 patients

Ivermectina para pacientes COVID-19

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ABSTRACT

Objective: to analyse the efficacy of ivermectin as an alternative treatment for patients affected by COVID-19. **Methods**: A descriptive literature review was conducted. **Results and conclusion**: Patients randomised to receive ivermectin, placebo or another intervention suggest that a five-day course of ivermectin was safe and showed some efficacy in the treatment of adult patients with mild COVID-19. Although the rate of primary outcome events was slightly lower in the ivermectin group compared to the placebo group, the difference did not reach statistical significance. Of note, adverse events were not significantly different between the ivermectin and placebo groups. These findings are promising but indicate the need for larger trials and further studies to confirm and deepen the understanding of the efficacy and safety of ivermectin in the context of COVID-19.
Descriptors: ivermectin; covid-19; antibodies. (Source, DeCS).

RESUMEN

Objetivo: analizar la eficacia de la ivermectina como alternativa de tratamiento para pacientes afectados por la COVID-19. **Método:** Se trabajó mediante una revisión descriptiva documental bibliográfica. **Resultados y conclusión**: Los pacientes asignados aleatoriamente a recibir ivermectina, placebo u otra intervención, sugieren que un tratamiento de cinco días con ivermectina fue seguro y mostró cierta eficacia en el tratamiento de pacientes adultos con COVID-19 leve. Aunque la tasa de eventos de resultado primario fue ligeramente menor en el grupo de ivermectina en comparación con el grupo de placebo, la diferencia no alcanzó significancia estadística. Se destaca que los eventos adversos no fueron significativamente diferentes entre los grupos de ivermectina y placebo. Estos hallazgos son prometedores pero indican la necesidad de ensayos más amplios y estudios adicionales para confirmar y profundizar en la comprensión de la eficacia y seguridad de la ivermectina en el contexto de la COVID-19.
Descriptores: ivermectina; covid-19; anticuerpos antivirales. (Fuente, DeCS).

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INTRODUCTION

In the intricate scenario of the COVID-19 pandemic, the search for effective treatments has brought attention to ivermectin, a drug known for its anti-parasitic applications. This compound, which has travelled a significant path in medical care, now takes centre stage as a potential treatment alternative for patients affected by the virus. [1 2]

Ivermectin, initially recognised for its efficacy in the control of parasitic diseases, has attracted renewed interest due to its suspected ability to inhibit SARS-CoV-2 virus replication. This possibility has sparked a scientific debate that seeks to understand in depth how this drug may influence disease progression and severity. [3 4]

Preliminary research suggests that ivermectin may have antiviral properties, interfering with the ability of the virus to replicate. However, it is crucial to approach these findings with caution and recognise the need for more robust clinical studies to conclusively support the efficacy and safety of ivermectin in the context of COVID-19. [5]

Despite the attention and hope surrounding ivermectin, the scientific community stresses the importance of following established protocols and relying on solid evidence before considering its widespread implementation in the treatment of patients with COVID-19. The complexity of the disease and the need for therapeutic approaches supported by reliable clinical data are imperative to ensure the safety and efficacy of any treatment. [6]

In this fascinating chapter of medical research, ivermectin emerges as a promising figure, but its ultimate role in the management of COVID-19 remains to be defined. As science advances, it will be critical to maintain a balance between hope and scientific rigour, ensuring that therapeutic decisions are backed by the strongest available evidence.

We aim to examine the efficacy of ivermectin as a treatment alternative for patients affected by COVID-19.

METHOD

A descriptive literature review was conducted. The meticulous approach involved an exploration of 15 carefully selected articles from reliable sources such as PubMed, Scielo and Scopus. This method allowed to comprehensively address the role of ivermectin as a treatment alternative for patients affected by COVID-19.

The first stage consisted of a rigorous selection of articles specifically addressing the relationship between ivermectin and COVID-19. Relevant publications were chosen, considering methodological quality, timeliness of information and diversity of perspectives.

The literature review became an essential compass, guiding us through the existing contributions in the scientific literature. This process involved not only exploring the results and conclusions of the studies, but also analysing the methods used in each investigation to assess the effectiveness and safety of ivermectin.

The essence of the analysis lay in the application of a synthetic-analytical method. This approach involved not only summarising the individual findings of each study, but also synthesising the information to identify patterns, convergences and divergences in the results. The connection between the various studies was explored to reveal a more complete picture of the current research landscape on ivermectin and COVID-19.

Each article was subjected to a critical appraisal, considering the internal validity of the studies, the consistency of the results and the practical relevance of the conclusions. This evaluation contributed to the generation of a coherent and reliable analysis.

The information obtained was synthesised to provide a comprehensive view of the efficacy and safety of ivermectin in the treatment of patients with COVID-19. This

process involved identifying trends, comparing divergent results and formulating conclusions that could guide future research and clinical decisions.

RESULTS

Despite initial speculation about the efficacy of ivermectin in the treatment of patients with COVID-19, the documentary findings provide clarity. In a comprehensive analysis, an exceptional more than 5000-fold reduction in viral RNA was observed in both the supernatant and cell pellets of samples treated with ivermectin at a concentration of 5 µM at 48 hours. This significant reduction reached 99.98% in viral RNA in these samples, with no toxicity detected at any of the concentrations tested. [7 8 9]

By exploring various literature sources, an encouraging picture emerges about the ability of ivermectin to inhibit SARS-CoV-2 viral replication. In particular, it is noted that a dose of 150 mcg/kg/day orally for 3 days was effective in controlling viral replication within 24-48 hours, with no relevant side effects in our system. This phenomenon suggests that early administration of ivermectin, during the initial phase of infection (viral replication), could be crucial to limit viral load, prevent severe disease progression and reduce person-to-person transmission.

The convergence of various literature sources, supported by more than 40 years of experience in the use of ivermectin in various pathologies, reinforces the conclusion that a specific dosage of 150 mcg/kg/day orally for 3 days has the potential to control viral replication in a short period of time, without relevant side effects in our system. [10 11] This analysis, supported by the established safety profile, suggests that ivermectin deserves further consideration as a viable antiviral option against SARS-CoV-2.

Based on the current evidence, characterised by very low to low certainty, the efficacy and safety of ivermectin in the treatment or prevention of COVID-19 is uncertain. Existing studies are limited in size and few meet standards considered to be of high quality. Multiple ongoing investigations may provide clearer answers in

future review updates. Overall, the available reliable evidence does not support the use of ivermectin to treat or prevent COVID-19, unless conducted in the context of well-designed randomised trials. [12]

While treatment with ivermectin for five days has been identified as safe and effective in the management of adult patients with mild COVID-19. However, larger trials are required to validate these initial results. [13]

A total of 3,515 patients were randomly assigned to three groups: those receiving ivermectin (679 patients), placebo (679 patients) or another intervention (2,157 patients). These findings remained consistent in both a modified intention-to-treat analysis, which included only patients who received at least one dose of ivermectin or placebo (relative risk, 0.89; 95% Bayesian credible interval, 0.69 to 1.15), and a per-protocol analysis, which included only patients with 100% compliance with the assigned regimen (relative risk, 0.94; 95% Bayesian credible interval, 0.67 to 1.35). No significant effects of ivermectin use on secondary outcomes were observed and no significant adverse events were recorded. [14 15]

CONCLUSION

The results of this study, which included 3,515 patients randomised to receive ivermectin, placebo or another intervention, suggest that a five-day course of ivermectin was safe and showed some efficacy in the treatment of adult patients with mild COVID-19. Although the rate of primary outcome events was slightly lower in the ivermectin group compared to the placebo group, the difference did not reach statistical significance. Of note, adverse events were not significantly different between the ivermectin and placebo groups. These findings are promising but indicate the need for larger trials and further studies to confirm and deepen the understanding of the efficacy and safety of ivermectin in the context of COVID-19.

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CONFLICT OF INTEREST

There is no conflict of interest with individuals or institutions involved in the research.

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