CHAPTER: 16

SOLIDARITY CLINICAL TRIAL FOR COVID-19 TREATMENT-A SYSTEMATIC REVIEW

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INTRODUCTION

The virus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the source of COVID-19. It was first discovered in Wuhan, the Chinese province of Hubei, in December 2019, and in 2019–20 it spread to other parts of the world and became a pandemic [1]. The WHO officially designated it COVID-19 on February 11, 2020. Director-General of the WHO, Tedros According to Adhanom Ghebreyesus, the word is a combination of the terms "CO" for corona, "VI" for virus, "D" for disease, and "19," which stands for the year the epidemic was first discovered (December 31, 2019) [2]. Tedros Adhanom Ghebreyesus, Director-General of the WHO, underscored the challenge of conducting numerous small trials for the coronavirus vaccine with diverse methodologies, potentially lacking adequate evidence. As a result, the WHO and its partners are coordinating a study, known as the SOLIDARITY Trial, to compare untested treatments across various countries. Tedros Adhanom Ghebreyesus emphasized the trial's extensive international scope and its purpose of generating robust data on the most effective treatments [3].

In order to increase the chances of success, the WHO is promoting coordination and offering common platforms for cooperative activities by easing connections between scientists, developers, and financiers [4]. The Solidarity Clinical Trial is a global, multi-country pharmaceutical trial that was announced on March 18, 2020, with the goal of treating Novel Coronavirus Disease (COVID-2019) [1]. It leverages the strengths of various stakeholders and utilizes the WHO's global mandate to swiftly convene 300 scientists, developers, and funders, increasing the chances of having one or more safe and effective vaccines available to all [4]. The trial, which will test four different drugs or combinations, also aims to compare their effectiveness. In particular, in order to ascertain the relative effectiveness of four treatment approaches against COVID-19, the Solidarity Trial will assess them in comparison to the standard of care. The Solidarity Trial aims to quickly determine whether any of the medications reduce the progression of the disease or increase survival by recruiting patients in several nations. Based on new research, more

medications may be added [1].

It is widely acknowledged that having a secure and reliable COVID-19 vaccination is an extra weapon in the pandemics arsenal. Simultaneously, there are a lot of obstacles and work involved in developing, testing, and producing this quickly and widely. Since we cannot foresee how many vaccinations will prove to be viable, it is imperative that we test as many as possible [4].

Rationale

The WHO emphasised the significance of trial speed and scale while addressing COVID-19. In order to expedite worldwide comparisons of experimental treatments, the solidarity trial aims to shorten the time by eighty percent. The goal of this approach is to get over the possible drawbacks of a large number of short trials that would not yield the solid evidence required to assess the relative efficacy of various treatments.

RESEARCH QUESTION

How successful was the solidarity clinical trial for COVID-19?

RESEARCH OBJECTIVES

1. To understand the challenge of solidarity.
2. To determine whether a COVID-19 vaccination that is both safe and effective is available.

RESEARCH METHODOLOGY

It was a systematic review that included a critical analysis and summary of every scientific paper that has been published on COVID-19. The purpose of the review was to present data about COVID-19 therapy efficacy and vaccine availability. This assisted in governmental decision-making regarding how to address this public health issue at local, national, and global levels, providing valuable insights for subsequent research on the topic.

RESULTS & DISCUSSION

The Solidarity Trial, led by the World Health Organization (WHO), involved over 400 hospitals in 35 countries testing four potential COVID-19 treatments: Remdesivir, Chloroquine/Hydroxychloroquine, Lopinavir/Ritonavir, and Interferon-β. While Remdesivir showed promise, concerns existed regarding the safety of Hydroxychloroquine. The trial aimed to determine the most effective treatment against the standard of care. Additionally, various global efforts were underway to develop a COVID-19 vaccine, with over 120 vaccines in development worldwide. Leading candidates included Moderna's RNA vaccine, Pfizer-BNTECH's vaccine, Oxford University/AstraZeneca's ChAdOx1 nCoV-19, CanSino Biologics/Beijing Institute's vaccine, and Sinovac's vaccine. The timeline for vaccine availability was uncertain, with experts suggesting mid-2021 as a likely target. Experimental treatments, including antiviral medications, ventilation, steroids, and plasma therapy, were also being explored to manage COVID-19 symptoms.

CONCLUSION

The WHO, in collaboration with its partners, initiated the Solidarity trial to identify an effective COVID-19 treatment. Currently, there is no specific treatment, but the WHO recommends four options: Remdesivir, Chloroquine/Hydroxychloroquine, Lopinavir/Ritonavir, and Lopinavir/Ritonavir with interferon beta. Remdesivir has shown positive results in reducing recovery time by 4 days, with its phase 3 clinical trial ongoing. Hydroxychloroquine's use in the trial was temporarily halted for safety review. The efficacy of the combination of Lopinavir/Ritonavir and Interferon-β is not well supported by data. Antiviral and retroviral drugs, artificial breathing, steroids, and blood plasma infusions are used in patient treatment; convalescent plasma therapy has been shown to help with some of these side effects. India is among the nations that are thinking about using plasma therapy as a possible COVID-19 treatment.

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