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Research Article

Covid 19- Edessy, Tawfik Supplements (CovETS)

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Abstract

Covid 19, the severe Acute Respiratory Syndrome Coronavirus 2, is the highly transmissible "Complex killer". A recent trend in the community is the consumption of herbal medicines containing certain active compounds, which have antimicrobial or antiviral, anti-inflammatory, and immunomodulatory activities. This study aimed to evaluate the effect of three herbs (Rhus Coriaria, thyme and Anise = Covets) on COVID-19 patients. Two groups were included, the first received the protocoled treatment and the CovETS (Covets (study) group= G1) while the second (control group= G2) received the protocoled treatment only. CovETS showed highly significant improvement with highly significant reduction of patient's mortality.

Keywords: *Covid 19; Herbal Medicine*

Introduction

The current epidemic situation of corona virus disease-19 (COVID-19) still remained severe [1].

The clinical presentation ranges from asymptomatic to mild respiratory tract infections and influenza-like illness to severe disease with accompanying lung injury, multiorgan failure, and death [2].

One of the important clinical features of COVID-19 infection is coagulopathy. In a recent cohort study, disseminated intravascular coagulation was found in 71% of patients who died due to COVID-19 infection [3].

Herbal medicine is one of the main modalities in traditional and complementary medicine and increasingly acknowledged due to the extensive use of medicinal plants amongst the general population. The use of herbs for treatment of respiratory ailments has been common worldwide for thousands of years. During the last three decades, several surveys were conducted which elucidated the use of different herbs for treatment of respiratory conditions [4].

Medicinal plants like thyme, Anise, and Rhus Coriaria contains many essential elements which possesses antiviral, antioxidant properties [5]. Rhus Coriaria plays an important role in prophylaxis and cure of viral infection. It is generally recognized as safe Sumac and affect the lipid layer in the virus envelope, disrupting the adsorption to the host cell and preventing the virus from penetrating the host cell, positively contributing to the infection [6]. One of the main disruptive effects of the SARS-CoV2 virus is the destruction of hemoglobin and erythrocyte and the resulting decrease in the capacity to carry blood oxygen and carbon dioxide [7]. The study investigated the ant hemolytic effect of Sumac tannins which have a modifying effect on the erythrocyte membrane structure. It was determined that Sumac

tannins were incorporated into the erythrocyte membrane and increased the hardness of the hydrophilic region of the lipid bilayer of the RBCs [8]. A study isolated 6-Pentadecylsalicylic acid from sumac extract which found to exhibited antithrombin activity [9].

It was reported that the therapeutic effect of chloroquine against COVID-19 could be closely related to abnormal hemoglobin metabolism. Chloroquine might inhibit the virus proteins that attack the heme and prevent the binding of surface glycoproteins of the virus to porphyrins. Hence, hypoxia and dyspnea could be alleviated since the hemoglobin structure is protected [9].

Sumac has similar antimalarial effects as chloroquine, proved by *In vivo* and *in vitro* studies [10].

A plethora of studies demonstrated, through animal and human studies, that the use of Sumac was safe and did not exhibit side effects. A study reported that 30-day long administration of the Sumac extract, did not result in any toxicity [11].

Crude extract or pure compounds isolated from medicinal plants and/or herbs could be potential drug candidates against COVID·19 [12].

The essential oil of Covets plays an important role in COVID-19 infections including the damage of cytoplasmic membrane, degeneration of cell wall, decreased ATP synthesis, and membrane protein damage, reducing the protein - motive force, and increasing cell membrane permeability by reducing membrane potential [13].

Aim of Work

This study aimed to evaluate the effect of three herbs (thyme, Anise, and Rhus Coriaria = Covets) on COVID-19 patients.

Materials and Methods

Two groups were included in this prospective study on 535 COVID- 19 volunteered consented patients, the first (study group = G1= 385 patients) received the protocoled treatment of ministry of health and the Covets, while the second group (control group= G2= 150) received the protocoled treatment only. Participants subjected to history taking, clinical examinations, laboratory and radiological examinations.

All patients were followed up every 6 hours for 3 weeks. Improvement was considered according to patient's lab results and clinical pictures.

Statistical analysis: Recorded data were analyzed using the statistical package for social sciences.

Results

Medical disorders	G1 (102/385)	G2 (46/150)	P-value
Diabetes Mellitus	35 (9.1%)	13 (8.7%)	0.815
Hypertension	43 (11.2%)	19 (12.7%)	0.737
Cardiac	17 (4.4%)	10 (6.7%)	0.383
Asthmatic	7 (1.8%)	4 (2.7%)	0.749

Table 1: *Medically disordered patients.*

Medical disorders	G1 (n = 102)	G2 (n = 46)	P-value
Diabetes Mellitus	34/35 (97.1%)	6/13 (46.2%)	< 0.001**
Hypertension	43/43 (100.0%)	9/19 (47.4%)	< 0.001**
Cardiac	16/17 (94.1%)	5/10 (50.0%)	0.009*
Asthmatic	7/7 (100.0%)	2/4 (50.0%)	0.049*

Table 2: *Medically disordered patients improvement rates.*

Mortality rate	G1	G2	P
Male	3/210 (1.4%)	5/83 (6.0%)	0.029*
Female (Non pregnant)	1/165 (0.61%)	4/61 (6.6%)	0.016*
Female (Pregnant)	0/10 (0.0%)	2/6 (33.3%)	0.050*
Total	4/385 (1.04%)	11/150 (6.7%)	0.002*

Table 3: *Mortality rate.*

Discussion

COVID-19 is a global pandemic that has caused more than 468,308 deaths worldwide [14].

In Egypt, from 3 January 2020 to 10:36pm CEST, 18 April 2021, there have been 231,803 confirmed cases of COVID-19 with 13,591 deaths, reported to WHO, 5.9% [15], which is non significantly different from that (6.7%) of the second group of our study and highly significantly different from that (1.3%) of the first group (Covets).

There was significant difference in the number of improved cases in the studied group compared to the control group, this result was consistent with the results of a study performed by Suxin, et al [16] as they used traditional Chinese medicinal plants (TCM) and ordinary protocols compared with the use of ordinary protocols only.

Coronavirus SARS-CoV-2 and Diabetes Outcomes was evaluated in 2796 diabetic patients. Within 28 days, 1404 (50.2%) were discharged from hospital with a median duration of hospital stay of 9 (5 - 14) days, while 577 participants died (20.6%) [17], while in the present study, 46.2% were improved in the protocoled group, which is consistent with the above study and 97.1% were improved in the Covets group which is very much better than the above study.

According to Fei X., *et al*. 2021, in the evaluation of the COVID 19 patients with hypertension, the death rate was found to be 20.7%, while according to our study, there was no deaths among the Covets group [18].

According to M.A. de Graaf., *et al*. 2021, in the study about the short-term outpatient follow up COVID 19 patients, out of Eighty-one cardiac patients, 34 (41%) had been admitted to the ICU [19]. In our study, the improvement rate among the cardiac patients was found to be 50% in the protocolled group and 100% in the Covets group.

In a report of 5,683 COVID-19-linked deaths, the authors reported a higher probability of death in asthmatics with and without corticosteroid use [20]. In our study, the improvement rate among the Covets group was found to be 100%, while in the protocolled group was 50%.

According to https://www.worldometers.info/coronavirus/ 18th may, 2021 [21], the death rate among the COVID 19 patients was found to be 2.01% and the overall deaths in our study was 2.8%, while in the Covets group was found to be 1.04%.

Conclusion

- Treatment using selected medicinal plants has achieved success, with significant contributions.
- COVID-19 treatment results have shown that COVETS is effective in relieving symptoms, improving the cure rate, reducing mortality, and promoting the rehabilitation of convalescent people.

Recommendation

- Another study is needed to use CovETS as a sole treatment of Covid 19.

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