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TaibUVID for Minimizing COVID-19 Fatalities and Morbidity: An Evidence-based Approach for Better Outcomes (A Treatment Protocol)

Salah Mohamed El Sayed^{1,2,3,*}, Hamdi H. Almaramhy⁴, Yasmeen Talal Aljehani⁵, Ahmed M. Okashah⁶,
Mariam E. El-Anzi⁷, Mansour Barakah AlHarbi⁸, Rehab El-Tahlawi^{9,10}, Manal Mohamed Helmy¹¹,
Moutassim Aboonq¹², Osama Hamouda³, Osama Alhadramy¹³

¹Department of Clinical Biochemistry and Molecular Medicine, Taibah Faculty of Medicine, Taibah University, Al-Madinah Al-Munawwarah, Saudi Arabia

²Department of Medical Biochemistry, Sohag Faculty of Medicine, Sohag University, Egypt

³Integrative Medicine and Prophetic Medicine Course and Research, Taibah Faculty of Medicine, Taibah University, Al-Madinah Al-Munawwarah, Saudi Arabia

⁴Department of surgery, Taibah Faculty of Medicine, Taibah University, Al-Madinah Al-Munawwarah, Saudi Arabia

⁵Family medicine programme & Ministry of health affairs & Sayed Al-shuhada primary health care center, Al-Madinah Al-Munawwarah, Saudi Arabia

⁶Academic Affairs Director And Consultant Clinical Immunologist, Al-Madinah Directorate of Health, Al-Madinah Al-Munawwarah, Ministry of Health, Saudi Arabia

⁷Diabetic Center in King Fahd Hospital & Said Alshohada Primary Health Care Center, Al-Madinah Al-Munawwarah, Saudi Arabia

⁸Head of training and academic affairs and Designated Institutional Official (DIO), KFH, Al-Madinah and Leader of training and academic affairs taskforce in Al-madinah

⁹Department of Microbiology, College of Medicine, Taibah University, Saudi Arabia

¹⁰Department of Microbiology, Faculty of Medicine, Zagazig University, Egypt

¹¹Division of Pediatric Cardiology, Pediatrics Department, Maternity and children hospital, Hail, Saudi Arabia

¹²Department of Medical Physiology, Taibah Faculty of Medicine, Taibah University, Al-Madinah Al-Munawwarah, Saudi Arabia

¹³Division of Cardiology, Department of Medicine, Taibah College of Medicine, Taibah University, Al-Madinah Al-Munawwarah, Saudi Arabia

*Corresponding author: salahfazara@yahoo.com

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Abstract With the continuously expanding terrible pandemic of COVID-19 infection, globally increasing numbers of COVID-19 patients and contacts progressively jump to heavy burdens beyond capabilities. Developing and poor countries may face humanity disasters in the next few days unless urgent measures are rapidly performed. Standard anti-COVID-19 treatment should inhibit COVID-19 replication, repair virus-induced tissue damage and enhance patients' immunity. Unfortunately, such criteria are still lacking in current treatments resulting in relatively high viral infectivity, morbidity and mortality. Based on previous prophetic medicine research experience and the literature, we introduce TaibUVID therapy as a novel medicinal nutrition formulation. TaibUVID stands for Taibah University anti-COVID-19 treatment as a novel evidence-based approach (using natural products) for treating COVID-19 patients. A single TaibUVID dose includes: 1 large spoonful of nigella sativa oil (or 2 gram nigella sativa seeds) mixed with 1 gram of grinded anthemis hyaline and 1 large spoonful of natural honey. This mixture is to be chewed in the mouth and swallowed orally for both COVID-19 contacts and patients. We adjusted dosing regimen and period of treatment into three clinical levels including contacts or prophylaxis, mild cases and severe case. We also introduce novel nigella sativa oil (or nigella sativa decoction) nebulization for local treatment of pneumonia or bronchopneumonia that is faced in severe COVID-19 cases. The wonderful report by Ulasli et al. (Ulasli et al. Mol Biol Rep. 2014;41:1703-11) deserves a lot of interest where nigella sativa and Anthemis hyalina (chamomile) were confirmed to inhibit corona virus replication maximally. In addition, nigella sativa enhances immunity, exerts tissue protective effects and effectively treats co-morbidities. Oral honey exerts potent antiviral effects, enhances immunity and exerts tissue protective effects. Our suggested TaibUVID is a promising evidence-based approach to rescue lives, decrease fatalities and put a rapid end to COVID-19 pandemic.

Keywords: COVID-19, TaibUVID, nigella sativa, anthemis hyalina, oral honey and citrus sinensis

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1. Introduction

With the continuously expanding terrible pandemic of COVID-19 infection, globally increasing numbers of COVID-19 patients and contacts progressively jump to heavy burdens beyond capabilities. Developing and poor countries may face humanity disasters in the next few days unless urgent measures are rapidly performed. As worldwide health authorities and hospitals are currently overloaded, home treatment of contacts and mild COVID-19 cases may become a fact necessitating some evidence-based suggested measures in addition to some health advices. No single country is an exception away from COVID-19 infection. Revising the current treatment policies and guidelines is mandatory as hospitals capacities may be exceeded soon resulting in more threatening mortality rates.

2. COVID-19 Pandemic and Future Concerns

Unfortunately, ideal anti-COVID-19 medications are not existing so far. An ideal anti-COVID-19 medication (or a combination of agents) should be safe for such patients while conferring three basic therapeutic effects (and/or preventive health benefits): enhancing the antiviral immunity, tissue-protection (and tissue repair) and exerting potent antiviral effects. Revising the current global treatment modalities provided for COVID-19 patients and contacts clearly confirms that current COVID-19 remedies may be still far from those targets. Most available treatments are supportive rather than curative. Based on previous prophetic medicine research and experience, we introduce Taibuvid (TaibUVID) as a novel evidence-based approach (using natural products) for treating COVID-19 patients. TaibUVID stands for Taibah university anti-COVID-19 therapy.

3. How to Protect Patients' Lives from Coronaviruses?

Natural products e.g. nigella sativa and anthemis hyaline (chamomile) proved effective in decreasing coronaviruses replication by about 92% and 100%, respectively in in-vitro cultures [1]. Natural honey is a prophetic medicine remedy with proven potent antiviral and tissue protection effects. Both nigella sativa and natural honey are prophetic medicine remedies that gain popularity and public acceptability in Saudi Arabia and worldwide. The well-documented therapeutic benefits of nigella sativa (lung protection, increasing immunity and repair of tissue damage) are urgently needed to combat COVID-19 pandemic.

Coronaviruses are members of the Coronaviridae family that are enveloped viruses that contain non-segmented,

positive-stranded genomic RNA [2,3,4,5,6]. Ultrastructural analysis of Coronaviruses have revealed that they form pleomorphic particles that are roughly spherical but show variations in size (80-120 nm in diameter) and shape [7,8,9,10].

In spring 2003, a new human Coronavirus has been causing an epidemic outbreak in South East Asia and Canada [11]. At the time, the accused virus was rapidly identified as the SARS-CoV but it did not look like the human Coronaviruses. The SARS-CoV alarmed the world because it sickened more than 8,000 people and killed nearly 800 of them [12]. Recently, a novel coronavirus caused respiratory infectious disease with high mortality. The virus is called Middle East respiratory syndrome coronavirus (MERS-CoV). This novel MERS-CoV was first reported in Saudi Arabia and eight other countries in 2012 [13]. Currently, there are no approved drugs against Coronaviruses but some potential therapies have been proposed.

4. COVID-19 Infection

The world is currently witnessing an outbreak of a new coronavirus spreading quickly across China and affecting at least 80 other countries. With almost less than half a million infection, a worldwide death toll of at least 63,000 (as of 5 April 2020), and with the potential to affect up to two-thirds of the world population, COVID-19 is considered by the World Health Organization (WHO) to be a global health emergency. The speed of spread and infectivity of COVID-19 (also known as Wuhan-2019-nCoV) are dramatically exceeding those of the Middle East respiratory syndrome coronavirus (MERS-CoV) and severe acute respiratory syndrome coronavirus (SARS-CoV). In fact, since September 2012, the WHO has been notified of 2494 laboratory-confirmed cases of infection with MERS-CoV, whereas the 2002-2003 epidemic of SARS affected 26 countries and resulted in more than 8000 cases. Therefore, although SARS-Cov, MERS-Cov, and COVID-19 are all the result of coronaviral infections, the causes of the coronaviruses differ dramatically in their transmissibility. It is likely that these differences in infectivity of coronaviruses can be attributed to the differences in the rigidity of their shells which can be evaluated using computational tools for predicting intrinsic disorder predisposition of the corresponding viral proteins [14].

5. Nigella Sativa as a Potential Safe and Effective Treatment for COVID-19

Natural products are simple, cheap, economic, available, easy to administer and effective remedies. Natural products are widely accepted by the public Nigella sativa (NS) exhibits the rescue triad: immune stimulation, tissues (e.g. lung) protection and potent antiviral effects. NS is a confirmed remedy in prophetic medicine. NS can be

administered as intact seeds or powder (grinded seeds). Intact seeds can be crushed in the mouth and swallowed or be added to food or juices.

NS was reported as a strong stimulant and potentiator of the natural immunity and the immune system. NS was reported to increase splenocyte proliferation, suppress the secretion of inflammatory cytokines (TNF- α and IL-6), enhance the natural killer cytotoxic activities, increase bone marrow cellularity and increase the number of white blood cells. NS was also reported to increase the resistance against lethal infections, decrease lung pathological changes due to ovalbumin sensitization and enhance the production of INF-gamma [15].

NS conferred lung and tracheal protection in many research studies. NS was reported to protect against tracheal contractions induced by leukotriene B₄, induce tracheal relaxant effects, exert antispasmodic and mucociliary pulmonary clearance effects, protect the lungs and trachea against harmful irritants and enhance lung protection during pulmonary aspiration. NS was also reported to protect against lung injury in many disease conditions e.g. hyperoxia-induced lung injury, improve asthma symptoms and wheezing frequency together with improving pulmonary function tests in asthmatic patients and exert antihistaminic effects in the airways of asthma patients [15].

NS was also reported to improve the respiratory symptoms and lung function tests in human war victims [16], improve all the parameters of respiration in asthmatic patients [17], potentiate immunotherapy in patients with allergic rhinitis [18] and decrease allergic serum parameters e.g. IgE and eosinophilic count. NS was also reported to improve the subjective feeling in patients with allergic diseases [18].

6. Promising Antiviral Effects of Nigella Sativa

NS was reported to exert potent antiviral effects with raising the endogenous human antiviral immunity (serum interferon) in patients having viral hepatitis C [20]. NS was reported to decrease corona virus replication and decrease the virus load of corona viruses in virus cultures by more than 95% [1]. NS was also reported to maintain seronegative condition in an AIDS patient [21].

7. NS is a Safe Effective Treatment in Many Diseases In Human Patients

NS was reported to be safe, effective, and tolerable for use in human patients having diabetes mellitus, hypertension and hyperlipidemia [22].

NS was used in many reported and published human studies in many countries to treat different diseases e.g. uncontrolled diabetes mellitus with uncontrolled hyperlipidemia [23], insulin resistance syndrome [24], cardiac dysfunction [25], hypertension [26], rheumatoid arthritis [27], allergic rhinitis [28], helicobacter pylori infection [29], psoriasis [30]. NS was reported to exert

many prophylactic benefits against a lot of diseases e.g. asthma [31,32]. Moreover, NS was reported to enhance memory, attention and cognition in healthy human volunteers [33].

8. Natural Honey and Its Therapeutic Benefits

Natural honey has anti-oxidant, anti-bacterial and anti-inflammatory properties. Natural honey is a confirmed remedy in prophetic medicine. It can be used as a wound dressing to promote rapid and improved healing. These effects are due to honey's anti-bacterial action, secondary to its high acidity, osmotic effect, anti-oxidant content and hydrogen peroxide content. The use of honey leads to improved wound healing in acute cases, pain relief in burn patients and decreased inflammatory response in such patients [34].

9. Antiviral Effects of Natural Honey

Honey products are promising as antiviral medicinal treatments and nutrition. A recent meta-analysis reported an evidence from many trials that propolis is the best of all natural products in the treatment of herpetic skin lesions, especially those related to HSV-1 [35]. Al-Waili et al. reported the use of honey in adult patients with recurrent attacks of herpetic lesions (labial and genital) [36]. Topical treatment with honey was compared with acyclovir treatment. Honey showed better results with no side effects, over patients using acyclovir who reported itchiness [36]. The trial showed that topical honey application was effective in the management of pain and other signs and symptoms of recurrent lesions from genital and labial herpes [36]. Manuka honey efficiently inhibited influenza virus replication and exerted virucidal effects [37]. Honey was also reported to help in herpes simplex gingivostomatitis in children [38].

10. Anthemis Hyalina and Citrus Sinensis Inhibit Corona Viruses Replication

Anthemis hyaline was reported to suppress the replication of coronaviruses by 100% while *citrus sinensis* (sweet orange) was reported to suppress the replication of coronaviruses by less than 90% [1].

11. TaibUVID Treatment for COVID-19

Herein, we introduce TaibUVID treatment as a potential curative medicinal nutritional therapy for COVID-19 contacts and patients.

A single TaibUVID dose includes: 1 large spoonful of nigella sativa oil (or 2 gram Nigella sativa seeds) mixed with 1 gram of grinded anthemis hyaline and 1 large spoonful of natural honey. This mixture is to be chewed in the mouth and swallowed orally (Figure 1 – Figure 3).

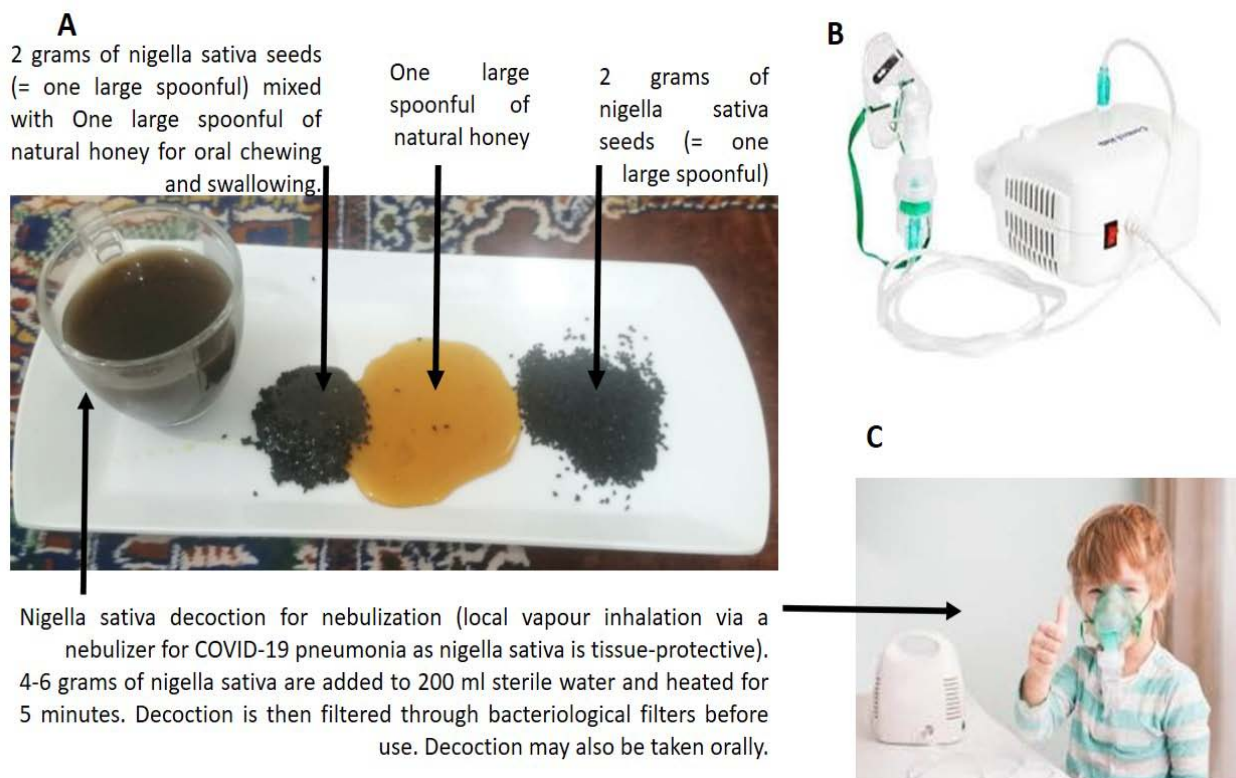


Figure 1. Decoction of nigella sativa for nebulized local vapour administration to treat pneumonia



Figure 2. Anthemis hyalina (chamomile) and citrus sinensis (sweet orange) inhibit corona viruses replication



Figure 3. A single TaibUVID dose includes: 1 large spoonful of nigella sativa oil (or 2 gram Nigella sativa seeds) mixed with 1 gram of grinded anemisi hyaline (chamomile) and 1 large spoonful of natural honey. This mixture is to be chewed orally

12. COVID-19 Treatment Objectives Using TaibUVID

Table 1. Targeted and suggested evidence-based TaibUVID treatment for COVID-19 infections

Effective COVID-19 therapies should achieve the following:

- enhance antiviral immunity.
- inhibit virus replication.
- exert tissue-protective effects.

Unfortunately, current COVID-19 treatments are not as needed.

Components of the evidence-based **TaibUVID** treatment (natural products) for COVID-19:

A single TaibUVID dose includes:

1 large spoonful of nigella sativa oil (or 2 gram Nigella sativa seeds) mixed with 1 gram of grinded anemisi hyaline and 1 large spoonful of natural honey. This mixture is to be chewed orally.

1. Nigella sativa:

- Inhibits corona virus replication (>90%).
- Potentiates immunity.
- Protects tissues
- exerts potent anti-inflammatory effects.

2. Oral honey:

- exerts potent Anti-inflammatory effects
- exerts tissue-protective effects
- exerts potent general anti-viral effects.

3. Anthemis hyaline:

- Inhibits corona virus replication (100%).

N.B. Citrus sinensis juice should be provided with all meals.
Citrus sinensis inhibits corona virus replication (<90%).

- To save human lives and minimize mortality.
- To make use of therapeutic benefits of NS/honey in COVID-19 patients.
- To make use of the antioxidant effects of NS/honey in COVID-19 patients.
- To make use of the immune potentiating effects of NS/honey in COVID-19 patients.

13. Treatment Protocol Using TaibUVID

N.B. Serum and blood samples are taken before treatment and every day (or every other day) till cure God willing (in shaa Allah).

-2 ml serum from every patient (before treatment, every 2 days and after finishing treatment) should be kept in eppendorf tubes in -30C for future laboratory analysis.

14. Treatment Guidelines for COVID-19 Patients and Contacts

***Level I measures: (For prophylaxis and contacts):

One TaibUVID dose (once or twice daily till end of COVID-19 pandemic).

-Add sweet oranges to regular diets.

*** Level II measures: For confirmed patients (mild to moderate cases):

One TaibUVID dose (2-4 times daily for a week).

-Add sweet oranges to regular diets.

*** Level III measures: For severe cases (with

pneumonia), comatosed patients and ventilated patients:

-Add sweet oranges (or fresh orange juice) to regular diets in all the three stages of level III measures.

IIIA- If patient can swallow: One TaibUVID dose (5-6 times daily for 1-2 weeks).

IIIB: If patient cannot swallow, drowsy or comatosed: dissolve one TaibUVID dose in 20 ml water. Give orally using a nasogastric tube 5-6 times daily for 1-2 weeks).

IIIC. For patients having pneumonia: Give treatment as IIIA or IIIB (one TaibUVID dose (in 20 ml water if patient cannot chew). Give orally using a nasogastric tube 5-6 times daily for 1-2 weeks).)+ nebulized nigella sativa decoction vapor.

How to prepare nebulized nigella sativa decoction vapor?

*4-6 grams are boiled in water and the resultant hot water (200-300 ml) is cooled up. Then, NS decoction water is filtered in a complete aseptic medical environment to remove the seeds. The NS water is nebulized via a nebulizer and the vapour is administered to patients through a face mask (to improve the lungs condition and the respiratory functions) (Figure 1).

- 1 cup of natural orange Juice containing 1 gram of anthemis hyalina 4 times daily (orally or through nasogastric tube).

N.B. If nebulized nigella sativa decoction cannot be prepared, nigella sativa oil can be used for nebulization.

15. Patients follow-up:**N.B. Patients evaluation should be done twice weekly.**

1. Clinical evaluation: on daily basis (to assess the clinical improvement of symptoms, especially respiratory condition and the response to treatment)

2. Laboratory evaluation:**1) Determining virus count (load) and activity:**

- RT-PCR for determining virus load in serum and respiratory (nasal or pharyngeal swabs).
- Repeating nasal swab for detecting PCR seroconversion.

2) Evaluating organ functions and extent of tissue damage or repair:

- Respiratory function tests and chest X-ray and chest CT or MRI.
- Kidney function tests
- Liver function test.

3) Evaluating COVID-19 cytokines storm and inflammatory activity:

- Serum CRP, serum Il-1, Il-2, Il-6, TNF- α and TGF- β

4) Evaluating immunity against COVID-19:

- Serum interferon-gamma
- Immunity markers (complete blood count for counting WBCs, lymphocytes and neutrophils)
- CD4 lymphocytes (T-helper cells) and CD8 lymphocytes (T-cytotoxic cells).

5) Evaluating antioxidant tissue protection vs COVID-19-induced tissue damage:

- Oxidative stress and tissue-damage markers (e.g. serum malondialdehyde and H₂O₂).
- Antioxidant tissue protection e.g. serum glutathione peroxidase, catalase and total antioxidant capacity).

Expected results:**TaibUVID treatment results in:**

- Rapid seroconversion from positive to negative in COVID-19 cases
- Decreased morbidity and mortality.
- Tissue protection and rapid recovery
- Increased immune potentiation (raised WBCs, CD4 lymphocytes, CD8 lymphocytes and Interferon-gamma).
- Decreased anemia and physiological leucocytosis
- Decreased oxidative stress and tissue-damage markers (decreased malondialdehyde, increased glutathione peroxidase, increased catalase and increased total antioxidant capacity).

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