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Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with declaration under Article 17(2)(a); without
classification and without abstract; title not checked by the
International Searching Authority

(54) Title: GTN (GLYCERYL TRINITRATE) SOLUTION REDUCED RESPIRATORY DISTRESS IN COVID 19 PATIENTS IF
GIVEN BY NEBULIZATION

(57) Abstract:



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Gtn (Glyceryl Trinitrate) Solution Reduced Respiratory Distress In Covid 19 Patients If Given By Nebulization

Technical field

Problem: ARDS is series condition in sever and critical cases of Covid 19 patient

Purpose: GTN (glyceryl trinitrate) solution can reduced ARDS symptoms in Covid 19 patient if Given by Nabulization.

How to use (Methods):

¼ cm of GTN solution is placed in the evaporation chamber, of Nebulizer the amount determined according to the healthy condition of the patient, his weight, and the associated disease with addition to 3 cm Normal Saline. The drug is inhaled by the Nebulizer apparatus.

(Proving the effectiveness of the drug)

First: the patient was asked if he is improved or not.

Second: Place an oxymeter to measure the oxygen saturation before and after giving the solution.

Third: take and arterial blood sample and perform blood gas analysis before and after giving the solution.

Results:

Inhalation of the GTN solution by the nebulizer target the ventilated lung regions (Alveoli) lower their vascular resistance Directing blood flow to this regions and leaving the unventilated lung region.

Thus reducing shunting and Hypoxemia.

Conclusion:

GTN Solution reduced respiratory distress in Covid 19 patients if given by Nebulization.

Background Art

Protocol used for treatment of Covid 19 patient is only supportive

Supportive treatment: is aimed at reliving symptoms

Till this moment no drug or vaccine present for treatment or prophylaxis from a novel corona virus disease.

However many of the symptoms can be treated and therefore treatment based on the patient's clinical condition. Moreover supportive care for infected persons can be highly effective.

The problem in the treatment of Covid 19 patient is no specific drugs or vaccines available for treatment of Covid 19 exist till now

No specific antiviral treatment for Covid 19.

However, drug previously developed to treat other viral infection are being tested to see if they might also be effective against the virus that causes Covid 19.

The problem is the virus is highly adaptive reproduce so rapidly. They have plenty of opportunity to mutate with each new generation potentially developing resistance to whatever drugs or vaccines we develop.

Example of drug used in treatment of Covid 19 patients

1. Hydroxyl chloroquine and chloroquine
2. Azithromycine
3. Remdesivir.
4. Tamiflu
5. Avigan
6. Convalescent. Plasma

Disclosure of invention

Nitronal aqueous solution contain glycery trinitrate. 1 mg per 1 ml ~

Improving the respiratory distress in Covid 19 patient decrease (↓ hypoxia) in mild, moderate, severe, critical patients preventing the deterioration of the condition and reach to put the patient on artificial respiratory machine if given by nebulization

How to use (Methods):

¼ cm of GTN solution is placed in the evaporation chamber, of Nebulizer the amount determined according to the healthy condition of the patient, his weight, and the associated disease with addition to 3 cm Normal Saline. The drug is inhaled by the Nebulizer apparatus.

The new things is one of label use of GTN (nitroglycerin) glycery trinitrate by inhalation not by infusion and use in respiratory problem not in cardiac problem as the drug known

Claims

New elements needed to protect:

1. Off – label use of glyceryl trinitrate (nitroglycerin) who is used to treat cardiac patients mainly to treat respiratory distress syndrome (ARDS) in Covid 19 patient
2. The way (method) to use the drug nitroglycerin (glyceryl trinitrate) solution by the nebulizer not by infusion.

URGENT**PATENT COOPERATION TREATY****PCT****DECLARATION OF NON-ESTABLISHMENT OF INTERNATIONAL SEARCH REPORT**(PCT Article 17(2)(a), Rules 13*ter*.1(c) and (d) and 39)

Applicant's or agent's file reference	IMPORTANT DECLARATION	Date of mailing (day/month/year) 08 September 2020
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International Patent Classification (IPC) or both national classification and IPC A61K 31/12 (2006.01)i; A61P 11/00 (2006.01)i; A61P 31/12 (2006.01)		
Applicant AHMED, Mohamed Kamal Mohamed		

This International Searching Authority hereby declares, according to Article 17(2)(a), that **no international search report will be established** on the international application for the reasons indicated below.

1. ☒ The subject matter of the international application relates to:
- a. ☐ scientific theories
 - b. ☐ mathematical theories
 - c. ☐ plant varieties
 - d. ☐ animal varieties
 - e. ☐ essentially biological processes for the production of plants and animals, other than microbiological processes and the products of such processes
 - f. ☐ schemes, rules or methods of doing business
 - g. ☐ schemes, rules or methods of performing purely mental acts
 - h. ☐ schemes, rules or methods of playing games
 - i. ☒ methods for treatment of the human body by surgery or therapy
 - j. ☐ methods for treatment of the animal body by surgery or therapy
 - k. ☐ diagnostic methods practised on the human or animal body
 - l. ☐ mere presentations of information
 - m. ☐ computer programs for which this International Searching Authority is not equipped to search prior art
2. ☐ The failure of the following parts of the international application to comply with prescribed requirements prevents a meaningful search from being carried out:
- ☐ the description ☐ the claims ☐ the drawings
3. ☐ A meaningful search could not be carried out without the sequence listing; the applicant did not, within the prescribed time limit:
- ☐ furnish a sequence listing in the form of an Annex C/ST.25 text file, and such listing was not available to the International Searching Authority in a form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.
 - ☐ furnish a sequence listing on paper or in the form of an image file complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.
 - ☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rule 13*ter*.1(a) or (b).
4. Further comments:

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**DECLARATION OF NON-ESTABLISHMENT
OF INTERNATIONAL SEARCH REPORT**

International application No.

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The present claims are composed of two claims which are related to the use of the already known chemical compound (glyceryl nitrate) in treatment of respiratory diseases in particular Covid 19 patients through the usage the stated compound solution by a nebulizer, which comply with article (17) from PCT.