

New Hypothesis of Cleaning of Coronavirus Nanoparticle Spikes

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ABSTRACT

Purpose: The aim of this study is to gain insight into the way the Covid-19 works on the alveolar surface and the hypothesis of cleaning of the virus spike particles by means of CNT is suggested to obtain a *real specific vaccine*.

Introduction: Few people have so far considered the anatomical extension of the interstitial pulmonary surface to which virus attaches and expands together with the great quantity of virus nanoparticles that could act on the alveolar site of the lung. We have focused our research also on a mathematical estimation of how the infinitesimally small and hardy nanoparticles in Covid-19 act. We think in addition, that the nanoparticle spikes of the Covid-19 surface may also interface through its electro-chemical properties to peripheral nerve axons promoting electrical migration on nerve cells of the lung through the Vagus nerve and Sympathetic System. This mechanism involves many different organic molecules of the interstitial alveolar surface and consequent inflammatory response, cell adhesions and microvascular thrombosis.

Materials: A mathematical estimation for covering almost half of the human lung surface by Covid-19 could be some *thousands of million billions of virus particles*; breathing involves 28.800 breaths a day. In addition we think that the Covid-19 particle could be like the CNT particle, able to attack and promote cellular and molecular interaction inside the lung's nervous system. This action, starting from the olfactory and taste nerves could interface through electro-chemical properties with different organic molecules, promoting cellular migration on nerve cells of the lung through the vagus nerve neurons and sympathetic system, producing additional pulmonary palsy and death. Due to the strong electrical activity of CNT particles, we suppose and believe that it is possible to clean the Covid-19 particle spikes of Coronavirus in laboratories (white chamber) in order to render it harmless, and obtain a *real specific vaccine*.

Conclusion: We hope these pulmonary anatomico-pathological data together with the mathematical evaluations of Coronavirus nano-particles could give better possibility of studying the virus activity on our body. The new views into the inside mechanism, evidenced by the possibility of electrical molecular interaction of CNTs with different molecular particles of Covid-19 could stimulate further studies in laboratories to obtain a *real specific vaccine* and to prevent other pandemic diseases.

Keywords: Nanoparticles; Covid-19; CNTs; Neuro-mechanism; Contagion; Spike mechanism

INTRODUCTION

The coronavirus has been ascertained to be contagious via nose, eyes, mouth, and perhaps feces, but today we

know that the lung isn't the only location of the virus in the body. It is known that the nanoproteins of Covid-19

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the lung isn't the only location of the virus in the body. It is known that the nanoproteins of Covid-19 are able to remain suspended for hours in objects such as fabrics, ceramics, paper, etc., and for up to two hours in substances under the form of droplets after a person has spoken or sneezed into the air [1]. Additionally, people are normally not immunized, and it has been observed that these nanoparticles can be passed on to others by infected persons who do not show any symptoms; this clinical situation makes contagion of Covid-19 hard to contain [2].

Moreover, after treatment, it has been confirmed that reinfection of Covid-19 is always possible, but we do not know if this is due to a lack of medical attention, to the fact that different number and species of viral spike nanoproteins may aggregate and change producing more aggressive forms, or if it attacks persons with low resistance due to other diseases or having a mild infection; right now we don't know how deadly it is. Real immunological knowledge maintains that this virus protein is less aggressive and transmissible in summer months because temperature and humidity rise and virus droplets collide with water molecules, reducing their great virulence. Due to this seasonal condition it is highly possible that on the one hand we see the end of the outbreak and on the other hand that the Covid-19 could also become endemic [3].

Despite the aggressive action and clinical manifestations of Covid-19, the complete alveolar tissue contagion mechanism is not yet completely known. In fact, we cannot exclude that the Covid-19 particle may be electrical like the CNT particle, able to attack and promote cellular and molecular interaction in the lung's nervous system [4]. In this case, in our opinion, this action could interface through electro-chemical properties with different organic molecules of neurons in the interstitial alveolar structures which promote adhesions of virus particles and migration to nerve cells of the lung through the Vagus nerve and Sympathetic nerve

system. The supposed electro-chemical conductance of coronavirus particles could demonstrate the potential health risk (inflammatory response) like that of CNT particles through inhalation, eyes, Alderman nerf of outer ear, mouth (Frank action), dermal contact, gastrointestinal absorption [5]. The continuous and intensive contamination of the nervous System of the body from the geografic local environment could be responsible, in addition to a persistent pneumonia, for a temporary loss of the olfactory and taste senses (probable contact points). The ways in which the Covid-19 could affect *neuronal electrical activity* on the pulmonary nervous system and its cellular function are not still studied, but patients' deaths could also be due to pulmonary palsy owing to the strong electrical properties of virusparticles on lung innervation: *this hypothesis must be studied to have a better knowledge of the inside electrical mechanism of the activity of the particle spikes of the virus*. We additionally believe that due to strong electrical activity of CNT particles, they could also interface through its electro-chemical properties with different organic molecules of Covid spike particles, responsible for lung inflammatory reaction. Due to this activity, we suppose and believe that it would be possible to realize the hypothesis of cleaning the Covid-19 particle spikes in laboratories in order to render it harmless.

MATERIALS AND METHOD

At the start of contagion clinical signs of alveolar inflammation of the lung by Covid-19 are like the flu syndrome, persistent cough, fever, respiratory dyspnea, worsening soon with suffocation, chok- ing, difficulty breathing, increased minimal blood pressure and distress of right heart, pathological inflammatory changes of interstitial tissues of alveolar surface increasing and becoming extensive. We have evaluated the need to study and gain insight into the area in which the Covid-19 particle works on

the contact surface of the interstitial structure to evaluate the total anatomic extension of the interstitial pulmonary surface to which it attaches and expands its aggressive behavior, together with the quantity of virus particles that could act on the alveolar site of the lung. For this reason, we have also focused our attention on a mathematical estimation of how this small and hardy nanoparticle Covid-19 acts, given that the human body offers it an easy and very large possibility of attack to the its lung's extensive alveolar surface.

Scientifically it was ascertained that the coronavirus Covid-19 is constituted by an extra-large RNA genome from 26,000 to 32,000 letters in length with spherical shape and surrounded by a fatty envelope, as observed under the electron microscope; it is covered on its surface by a crown of spikes. Analysis of the genetic structure of the club-shaped spikes made up of nanoparticles protein shows that they are utilized as harpoons to penetrate the interstitial wall of human alveoli of the lung; it is also ascertained that the spike protein has two action tools: the binding domain (hexapeptide), a kind of grappling hook that grips onto host cells, and the cleavage site (proteinases), a molecular opener that allows the nano-particles of the virus to crack open and enter host cells [6]. For this reason, it is now very important to consider the estimation by means of mathematical evaluation of the physical situation of the match between particles of coronavirus Covid-19 and the interstitial alveolar tissues of lungs in order to evaluate the match which occurs.

First of all, it is to be considered that the number of breathing acts we do in one minute is 20; in an hour 1200; in a day 28,800.

The extension of the alveolar interstitial surface of lung is estimated to be of the order of 100 m^2 , corresponding to 10^6 cm^2 .

On the other hand, the virus in itself, whose appearance is near to the ellipse, or fairly close to the sphere, has a diameter close to 110 nm, (a nanometer representing the billionth part of a meter). From this,

we can compute the surface covered by a single virus on a bi-dimensional projection of the interstitial alveolar tissues of lungs

$$S_v = \pi R^2 = \pi \cdot (55 \cdot 10^{-9})^2 \approx 9.50 \times 10^{-15} \text{ m}^2 = 9.50 \times 10^{-11} \text{ cm}^2$$

In simple words, this means that, to cover even just a third of the 10^6 cm^2 of interstitial surface, approximately 10^7 particles would be needed: hundreds of millions of billions of particles.

In terms of volumes, similarly, where we estimate the lungs' volume to be of the order of 6000 cm^3 we see that the volume of a virus nanoparticle is of the order of

$$V_v = \frac{4}{3} \pi R^3 = \frac{4}{3} \pi \cdot (55 \cdot 10^{-9})^3 \approx 6.969 \times 10^{-22} \text{ m}^3 = 6.969 \times 10^{-16} \text{ cm}^3$$

Purely in words, once again, this means that, to cover even just a third of the $6 \times 10^3 \text{ cm}^3$ of the volume of the lungs, approximately 10^{19} particles would be needed: tens of thousands of millions of billions of particles

These mathematical and physical data are the real measurement of the mechanism of lung contagion and it is really crucial for environmental transmission.

The data on the very large alveolar surface of the human lung corresponding to $1,000,000 \text{ cm}^2$ and to cover almost half of its surface by Covid-19 could be about of thousands of millions billion of vi-rus particles.

Considering the amount of space contained within the human lung of about 6000 mL, corresponding to 6000 cm^3 . We understand the large possibility offered by the human body to invasion by nanoparticles of Covid-19; we have also to evaluate the number of breathing acts we do in a day: 28.800 times.

On the other hand, the data on Covid-19 show that its infinitesimal structure and the shape of its nanoparticle enables it to diffuse a very large quantity in the air breathed by the lungs of a person and the great possibility to produce acute inflammation in the interstitial structure of the pulmonary alveoli. Moreover, the complexity of the genome of this coronavirus which reaches from 26,000 to 32,000 letters in length is not to be overlooked as it could to justify possible other mutations.

In addition, we cannot exclude that the virus Covid-19, entirely covered by millions of toxic nano- particles (club-shaped protein spikes) may be like the CNT particle, able to attack and promote cellular and molecular interaction. This action could interface through its electro-chemical properties with different organic molecules of interstitial nervous structures which promote virus nanoparticle adhesions and cellular migration to nerve cells of the lung (7). The supposed

electro-chemical conductance of the coronavirus particle could demonstrate the potential for a strong and persistent inflammatory response.

Due to the environmental contamination, the mechanism of pathological contagion of virus nano -particles of Covid 19 could start from the olfactory and Alderman nerf of outer ear, mouth taste nerve, interface through electro-chemical properties with sensorial nerve of nose and mouth (Frank action) and lead to a partial and temporary loss of the olfactory and taste senses. The ways in which Covid-19 affects neuronal electrical activity on the pulmonary nervous system and its cellular function have not yet been studied and deaths of patients with Covid-19 could also result from the strong electrical properties of virus particles acting on the interstitial structure of alveolar nervous System (7). The need to administer many different drugs and use curare to intubate patients and insufflate oxygen in the lung could in our opinion additionally worsen palsy of the pulmonary nervous system and lead to death.

DISCUSSION

We believe from these data that Covid-19 in future will continue to exist in an endemic state in the world as a continuous struggle in different geographic sites all over the world.

We are also convinced that women will be less affected (2 to 8 men) because their breathing is weaker, smaller and shallower than men and because they have different hormones in the body offering a various challenge.

In order to add value to the fight against the extent of the contagion by coronavirus, we pointed out the mathematical and physical data of the body (alveolar surface extension, physiological respiratory function, involvement mechanism of the Vagus nerve and sympathetic system of the lung). Investigations by pulmonary CAT scan just after death and autopsies of the corpses are needed, studying also at the SEM exam the deep structure of virus and its own spikes particles in different corpses in order to study the extensive penetration into the nerve body (Nerve Vagus) of the spike protein of virus.

On the other hand, according to previous considerations a future specific vaccine could be very hard or impossible to realise for Covid-19 due to the immense number of different and toxic nano-particles (millions of billions of particles) wrapping around the surface of this already well known conveyer virus (SARS-CoV-1).

In this special and deadly persistent new world situation we think since as we can't change anything by building specific antibodies, we must act on the mechanism of virus aggressivity and particularly on its nano-particles spikes. Our Hypothesis is to clean the virus surface making experimental researches in white laboratories by means of CNT particles able to cleaning up the Covid-19

in order to obtain real specific antibodies capable of defeating the existing pandaemic state.

CONCLUSION

Due to this real disastrous situation (which regards the body, the virus and the local environmental situation) we must work in laboratories to render the virus harmless destroying its spike particles responsible for nerve and lung attacks. The CNT particles having high electrical energy could interface through their electro-chemical properties with different organic molecules of Covid particle spikes. In order to win this challenge we suppose and believe that it is possible to clean up the Covid-19 spike-particles within laboratories in order to render it harmless and obtain specific vaccine or a particle spikes neutralizer.

Awaiting this we suggest from now on that it could be useful to apply an extensive, continuous sluicing of city surfaces and reduce the density of industrial areas in every geographic local lockdown (in fact, it could be the best means to limit the activity of the virus in densely populated areas diminishing their virulence on the contrary we will be obliged to do it after repetitive and countless lockdown and human deaths).

In other words we need to change absolutely the philosophy of living together in geografcial industrial areas and in the big cities of the world.

We hope that these new views on Covid-19 could stimulate further actions and studies in order to be able to defeat the epidemic and prevent other pandemic diseases.

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