

Short Communication

A BRIEF STUDY OF THE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 (SARS-COV-2) PANDEMIC IN 2019

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1. INTRODUCTION

Covids are a diverse category of pathogens that can cause disease in creatures or individuals. A few Covids are known to cause diseases that range from a common cold to a serious respiratory disease known as MERS (SARS). COVID-19 is the most common complex. This highly infectious disease is often referred to as the common cold. They had never seen these mysterious diseases before. The most irresistible disease triggered by late-found COVID is the coronavirus. This current infection and ailment were enigmatic before the episode began in Wuhan, China, in December 2019. Coronavirus is a pandemic that affects numerous nations worldwide at present. The most well-known side effects of COVID-19 are fever, dry cough, and sleepiness. Throbbing pain, nasal obstruction, migraine, conjunctivitis, sore throat, loose intestines, loss of taste or odor or skin rash, or finger or toe staining are more rare symptoms that may affect a few patients. These manifestations are usually mellow and start gradually. A few people get infected, but they have only incredibly gentle manifestations. A large number of people (about 80 percent) recover from the disease without requiring emergency clinic treatment. It turns out that about 1 in every 5 individuals who get Coronavirus is really sick and causes relaxation trouble. More advanced individuals are at greater risk of creating real diseases, including those with basic health conditions such as asthma, heart and lung disorders, diabetes, or malignancy. However, anyone can get Coronavirus and turn out to be genuinely sick. People of any age who experience fever and hack combined with trouble breathing/winding, chest torment/weight, or loss of discourse or development should urgently seek medical consideration. In the off chance that it is conceivable, it is prescribed to call the medical care provider or office first so that the patient can be coordinated to the right center. Individuals can get Coronavirus from other people who have the infection. The infection efficiently spreads by tiny nose or mouth beads from person to person, which are removed when

a person with Coronavirus hacks, sniffles, or talks. These beads are usually heavy, do not go far, and easily fall to the ground “In the off chance” that they take in these beads, individuals will get Coronavirus from a person infected with the infection. This is the reason why it is necessary in any situation to stay 1 meter) away from others. These beads can enter items and surfaces around humans, such as tables, door handles, and handrails. By touching these objects or surfaces, contacting their eyes, nose or mouth at that point, individuals can get contaminated. This is why it is important to wash your hands normally with cleaner and water or clean with hand rubbing based on liquor. Crown (from the Latin for ‘crown’) most commonly refers to COVID 2 (SARS-CoV-2), a Covid responsible for 2019-20, a genuine outstanding respiratory problem. The illness triggered by the infection and the Corona virus pandemic, the ongoing global pandemic, Flare-up Covid sickness 2019 (Corona virus). The strain of COVID that causes COVID disease 2019 (Corona virus), the respiratory disease responsible for the global Corona virus, is the severe exceptional respiratory disorder Covid 2 (SARS-CoV-2). Basically, referred to as the COVID, it was recently referred to as its temporary name, the current 2019 COVID (nCoV 2019), and has also been referred to as human COVID 2019 (HCoV-19/ HCoV-19). On January 30(2020), and a pandemic on March 11 (2020), the World Wellbeing Association announced the flare-up of a General Wellbeing Epidemic of Worldwide Concern. Systematically, SARS-CoV-2 is a strain of COVID linked to severe serious respiratory disease (SARSr-CoV). In addition, this is recognized to have zoonosis beginning stages, has near inherited resemblance to the bat COVIDS, recommending it ascended from a contamination bat-borne. There is no proof to interface with a middle of the road creature shop, such as a pangolin, to initially meet individuals. The tainting demonstrates unimportant natural orchestrated grouping, indicating that the flood opportunity to reach SARS-CoV-2 with individuals is likely to have occurred in late 2019.

The 2019 novel Covid (2019-nCov) was proposed as the temporary first name for the infection, according to the World Wellbeing Association (WHO). According to WHO 2015, this was against the use of geographical areas, animal organisms, or assembly of people in challenging circumstances and names of diseases. The certified name “severe acute respiratory syndrome Covid 2” was recognized by the Worldwide Panel on the Clinical Category of Infections on Feb 11 (2020). (SARS-CoV-2). For certain research papers, the WHO some of the time refers to SARS-CoV-2 as “the Coronavirus infection” in general well-being correspondences and HCoV-19 name was recalled in order to preserve a strategic distance from disorder with the disease SARS. The general public names both SARS-CoV-2 and the disease it causes known as “Covid” on a daily basis.

2. TAXONOMY AND PHYLOGENETICS

There is a location for SARS-CoV-2 with a large community of infections called Covids. With a solitary straight RNA section, it is a positive-sense single-deserted RNA (+ssRNA) disease. For eg, Center East Respiratory Condition (MERS-CoV, casualty rate ~34 percent), while other Covids are fit to produce ailments ranging from the basic virus to greater excessive diseases. After 229E, NL63, OC43, HKU1, MERS-CoV, and the first SARS-CoV, Covid is the seventh recognized person to be infected. SARS-CoV-2 is an organism from the subgenus Sarbecovirus, much like the SARS-associated Covid strain involved in the 2003 SARS flare-up (beta-CoV heredity B). And the structure of the RNA is about 30,000 bases long. In connecting a polybasic cleavage site, SARS-CoV-2 is a novel among known beta Covids, a brand name known to grow irresistible and infectious among different contaminations, along with a sufficient number of sequenced organized genomes A Phylogenetics tree of the history of change of a series of contaminations can be conceived to replicate. Five SARS-CoV-2 genomes were segregated from Wuhan by Jan 12 (2020) and itemized by the Chinese Group for Ailment Control and Avoidance (CCDC) and various associations; by Jan 30 (2020) the number of genomes increased to 42. A phylogenetics analysis of these examples showed that they were “profoundly related with all things considered seven transformations comparative with a typical predecessor” indicating that the primary human disease occurred in November or December 2019. 4,690 SARS-CoV-2 genomes inspected on six mainlands were publicly accessible as of 7 May (2020).

On Feb 11 (2020), the Worldwide Board of Trustees on Scientific Categorization of Infections reported that the distinctions between what was then called 2019-nCoV and the contamination strain from the 2003 SARS episode were lacking to make them distinct viral species according to current standards that involve progressive connections between Covids based on five saved game plans of nucleic acids. They subsequently recognized 2019-nCoV as a strain of genuine Covid-identified severe respiratory problem.

3. STRUCTURAL BIOLOGY

Each SARS-CoV-2 Virion is about 50-200 in diameter. Like other Covids, SARS-CoV-2 consists of four fundamental proteins,

specific to the proteins S (spike), E (envelope), M (layer), and N (nucleocapsid); the RNA genome is obtained by the N protein, while the infectious envelope is made up of other proteins such as S, E, and M. The protein Spike(S), which was imaged at the nuclear level using cryogenic electron microscopy, is the protein responsible for enabling the infection to modulate and intertwine with the host cell layer; its S1 subunit breakdown link, the combination of the S2 subunit, is obvious. With one protein subunit illustrated, SARS-CoV-2 spiked homotrimer. The restriction region of ACE2 is maroon. In a little while, Protein exhibiting investigates the spike protein of the contamination indicated that SARS-CoV-2 has an agreeable opportunity to get a kick out of the receptor angiotensin shifting over engineered 2. A group of people in China working with the complete infection genome by Jan 22 (2020) and a group of people working in the US using reverse hereditary qualities techniques openly and tentatively showed that ACE2 could go around as the SARS-CoV-2 receptor. Studies have concluded that, relative to the first SARS infection strain, SARS-CoV-2 has a higher tendency towards human ACE2. SARS-CoV-2 may be the same as basigin to assist in cell passage. Serine 2 (TMPRSS2) is essential for the SARS-CoV-2 pathway at the onset of transmembrane protease spike protein growth. After a SARS-CoV-2 virion related to the target cell. The TMPRSS2 cuts of the cell’s protease reveal the contamination spike protein, opening a blend peptide in the S-2 subunit, and the ACE2 host receptor After interaction, an endosome structure around the virion distinguishes it from the rest of the host cell. When the endosome’s pH decreases or when cathepsin, a host cysteine protease, severs it, the virion gets far away from it. At that point, the virion releases RNA into the cell and provides the cell with the power to deliver and spread duplicates of the infection that degrade additional cells. Three hazard factors that advance the shedding of new virions from cells and monitor safe response are conveyed by SARS-CoV-2 at any time. Whether or not they join the ACE2 law, as defined in relative Covids, which remain under investigation, or not (as of May 2020).

4. TRANSMISSION AND INFECTION

On Jan 20 2020, during the Corona virus deadly disease, people transmitting SARS-CoV-2 to individuals were confirmed. Initially, transmission was supposed to occur essentially through respiratory beads from hacks and snuffles within a range of about 1.8 m. (6 feet). As an alternative form of transmission, laser light dissipating experiments recommend talking. Another potential etiology for disease is aberrant contact through impaired surfaces. Fundamental examination shows that the infection remains practically over plastic (polypropylene) as well as treated steel (AISI 304) for up to three days, no longer due to cardboard for more than one day or to copper for more than four hours; the disease is inactivated by a cleaning agent that creates a lipid bilayer problem. Viral RNA has also been detected in samples of feces and semen from infected individuals.

On Feb 1 (2020), “transmission from asymptomatic cases is likely not a significant driver of transmission” according to the World Wellbeing Association (WHO). Nevertheless, an

early-stage epidemiological model in China indicated that “pre-indicative shedding might be ordinary among reported contaminations” as well as that subclinical infections might have been the source of a larger piece of defilement. In addition, a review of 94 patients admitted to hospital between January and February 2020 tested patients to be the best indicator of infection. There is some evidence of SARS-CoV-2 being transferred from humans to humans. Number of organizations have indicated that SARS-CoV-2 contamination is to restrict the link with creatures.

5. DISEASE COURSE

In order to explain the path of the infection, the production of evidence was grouped together. The World Wellbeing Association (WHO) assesses that the length of hatching is 124 hours, with a period of 1 to 14 days, from illness to manifestation. In addition, it is 139 hours to function by starting side effects to obtain professional advice and 300 hr to emergency clinic affirmation. The ailment phases from the beginning of side effects have been estimated to be isolated in the mid (0-96 hr), dynamic (122-192 hr), top (216-312 hr), and assimilation phases (14 days) based on discontrast enhanced trunk figured through (CT) tomography findings. Sub pleural ground glass opacities (GGO) located in the bottom lung projections comprise early phase disease. Reciprocal dissemination of the infective cycle and diffuse ground glass opacities are shown in dynamic stages (GGO). The presence of dense solidification, an insane example of clearing, and lingering parenchymal groups show progress to the pinnacle stage. Finally, the retention stage, which can last more than 624 hours, appears to show a higher limited disease measure on CT, a steady objective, as well as indications of recovery.

6. SIGN & SYMPTOMS

Coronavirus affects the number of individuals in various ways. Many dishonest individuals can make direct illness smooth and recover without hospitalization more irregular signs include: a sore pain, sore throat, looseness of the intestines, conjunctivitis, migraine, hyposmia, as well as colorless true symptoms of skin: breathing inconvenience or shortness of breath, chest torment or weight, lack of speech or change. Check without a doubt whether you have real appearances, fire clinical thinking. Call ceaselessly before visiting your office for PCP or prosperity. People with sensitive signs, who are often powerful, can manage their outcomes at home.

7. TRANSMISSIONS

COVID-19 spreads essentially when people are in close contact and one person takes in small globules made by a spoiled person (suggestive or then again not) hacking, sneezing, singing or talking. The WHO recommends 1 million (3 feet) of social division; the rule and counteraction of the United States Communities for Ailment (CDC) suggests two meters of social division (6 feet).

Transfer may also occur by fog concentrates, smaller dabs that can be visibly suspended all over for longer time frames. Trial

findings suggest that the infection can be triggered for as long as three hours in vaporized. In addition, a few episodes have been accounted for in swarmed and poorly ventilated indoor areas where tainted individuals spend extensive stretches of energy (such as cafés and clubs). In such regions, vaporized transfer has never been precluded. Some clinical methods conducted in well-being offices on COVID-19 patients can produce those smaller beads, and the output is transmitted more efficiently than normal in the infection.

Usually less, as the corrupted globules tumble to floors or surfaces, they will remain convincing if individuals still touch sullied surfaces, their eyes, nose or mouth with unwashed hands by then. After some time, the measure on the surface of sufficient powerful disease decreases until polluting cannot be reasoned as of now, as well as surfaces are agreed not to be the critical way the infection spreads. The level of contamination required by surface methods to submit contamination is dark, but the infection can be distinguished for up to four hours on copper, up to one day on cardboard, and up to three days on plastic (primarily polypropylene) and treated steel (AISI 304). With nuclear family disinfectants that pound the contamination outside the human body or on the hands, surfaces are easily sanitized. Disinfectants or colour, for example, when used within the human body, are not a medicinal remedy for COVID-19, and jumble prosperity when not used properly. A great deal of sickness is passed on by Sputum and Spit. Despite the fact that COVID-19 is certainly not a specifically transmitted infection, direct communication is suspected of sending the infection, for instance, personal association, kissing and waste-oral courses. In bosom milk, the infection may occur; however, either it is communicable to the child is doubtful.

Assessment of total individuals affected by one person suffering from COVID-19, with R_0 . The WHO's underlying R_0 assessments were 1.4-2.5 (normal 1.95); nonetheless, the fundamental R_0 (without measure control) to be more than 3.28 and middle R_0 to be 2.79 was identified by an audit at the beginning of April 2020. In any event, from the same month, CDC concentrate shows that the middle R_0 of the infection was to be 5.7, and with a simple R_0 likely as higher as 8.9 without control steps, with 95 percent certainty stretch.

8. DIAGNOSIS

A variety of testing equipment kits for the diagnosis of illness is distributed by the WHO. Constant inverse record polymerase chain reaction is the standard preparation for research (rRT-PCR). The test is conducted on a regular basis on respiratory models obtained from a nasopharyngeal swab; a nasal swab or sputum test can, however, be used similarly. In a time-frame between hours and two days, outcomes are usually determined. Blood tests can be used, but these entail fourteen days of destruction of two blood tests, and the findings have negligible brief worth of Chinese researchers had the option to isolate a SARS-CoV strain and issue the inherited succession so that laboratories worldwide could jointly produce polymerase chain response

(PCR) tests to detect infection contamination. Beginning on April 4, (2020). Immune response tests have been established, but not yet widely used (which can discern dynamic diseases and whether a person has been contaminated before). Immunity tests may be most effective two to three weeks after the symptoms of a person begin. The precision of the Chinese insertion in the testing was just 60 to 70 %. The underlying motivation behind the concern test on 21 Walk 2020 for use around the completion of that month was verified by the US Food and Drug Organization (FDA). The absence or existence of COVID-19 signs and signs alone is not sufficiently accurate for careful assurance.

Symptomatic rules given by Zhongnan Medical Clinic in Wuhan College prepared preparing for the identification of contaminations subject to clinical characteristics and epidemiological hazards These consist of the identification of individuals who, despite a foundation set apart by Wuhan's development or interaction with other defiled individuals, have at any rate two of the associated side effects: fever, pneumonii imaging characteristics.

An analysis reveals that COVID-19 patients were hospitalized for hacking in a sterile division, offering a salivation test along these lines, and diagnosed the infection in eleven out of twelve patients using RT-PCR. Compared to swab, this technique has the potential to be quicker and thus reduce the risk to medical service personnel (assortment at home or in the vehicle).

9. PREVENTION

The antibody to Corona virus is not common at the earliest until 2021. United States (U.S.). The guideline of the Public Foundations of Health exclusively indicates that any prescription outside the setting of a clinical primer for counteraction of COVID-19, before or after prologue to the SARS-CoV-2 infection. Past inoculation, other prophylactic confirmation, or successful drugs, a screw piece of COVID-19 administration aims to minimize and delay the tip of the plague, this is completed by pushing back the pollution rate to reduce the risk of overpowering flourishing associations, considering better care of current cases, and granting additional cases before persuasive medications or a neutral. Many determined to have COVID-19 or who agree that they could be infected are advised to stay at home by CDC, but to seek clinical consideration, call ahead before meeting a medical care provider, wear a face veil before entering the office of the medical services provider and when spreading hacks and sniffles with a tissue in either room or car or with someone else, consistently hand wash.

10. PROTECTIVE PERSONAL APPLIANCES

The use of individual protective covers on revealed body parts to enhance disease safety for health care teams that may come into contact with COVID-19 positive natural liquids. Breathable person protective gear facilitates the fulfillment of consumer

needs and thus offers a relative standard of infection insurance. Furthermore, adding tabs and various changes to the protected products may reduce the risk of spoiling during wearing and doffing (putting on and eliminating the equipment). For example, realizing a proof-based wearing and throwing off, one-advance gloves and outfit departure strategy, providing oral rules while wearing and throwing off, two-fold gloves, and the use of glove sterilization may similarly boost the team's clinical consideration safety.

10.1 Face Masks

The World Wellbeing Association (WHO) and several public welfare organisations (such as the United States Communities for Disease Prevention and Anticipation (CDC), the United Kingdom Public Wellbeing Administration (NHS), and the New Zealand Wellbeing Service) recommend that people wear non-clinical face covers in open settings where there is a common risk of transmission and where social elimination steps are taken. This recommendation is applied to reduce the asymptomatic and pre-indicative person's transmission of the disease, and is opposed to building preventive estimates, such as social distance. In terms of volume and travel isolation, face covers create barriers for expiratory beads scattered while coughing, laughing, sneezing and hacking. In addition, Shroud is obviously prescribed for individuals who may have been exploited and others who treat someone who may have the ailment.

10.2 Distancing Social

By closing different workplaces as well as schools and universities, holding travel and dropping big open gatherings, social removal strategies plan to reduce interaction of infected individuals with huge social activities. Sorting out guidelines also related to the fact that people stay separated at a distance of 2 m on every occasion (6.6 feet). After the introduction of social separation and stay-at-home requests, different locations had the option of continuing with a ground-breaking rate of transmission ("Rt") of shy of what one means that in those realms the illness is disappearing.

10.3 Hand-wash and grooming

The CDC, World Health Organization (WHO) and National Health System (NHS) suggest covering the nose and mouth with the aid of tissue or whenever hacking or sneezing at the moment when not draining a cloth, and recommend using inside the elbow in the absence of tissue. Legitimate hand tidiness is allowed after every hack or wheeze. In addition, the WHO suggests that people regularly wash their hands with cleaning agent and water for twenty seconds at any time, especially after taking off to the bathroom or when hands are recognizably dirty, before eating and after cleaning one's nose. The CDC indicates that the use of hand sanitizers based on liquor at any rate containing 60% liquor, but only when cleanser and water cannot be obtained promptly. For areas where business hand sanitizers are not

readily accessible, the WHO offers two community planning designs. The microorganism movement is joined by ethanol or isopropanol in these concepts. To help dispense with bacterial spores in the liquor, hydrogen peroxide is used; it is “not a functioning substance for hand antiseptics” Glycerol is used as a moisturizer.

11. MANAGEMENT FORECAST

Individuals are highly regarded, through liquid therapy, oxygen backing, and other helpful assessment of other indispensable organs affected. The CDC shows the people who felt they were transmitting the transmission of infection by wearing a simple face veil. To address the problem of respiratory disappointment, extracorporeal oxygenator (EO) has been used. Yet its advantages are still being looked at. Individual cleanliness and the best lifestyle and diet have been demonstrated so that balanced drugs can be useful in those with harmonious side effects at the beginning of the infection stage to achieve improved insusceptibility.

12. CONCLUSION

Corona Virus infection was transmitted from person to person by close contact as well as. By mean for airborne globules delivering by wheezing, hacking, sniffing, just as kissing So evade these exercises with tainted collaborator and other relatives. Covid can also interact with pet creatures, such as dogs, felines, pigs, turkeys, etc. Therefore, stay away from the individual transmitted and separate them whenever any disease exercises such as runs, cold, fever have been watched. And the rule of the ECDC (European Center for Disease Prevention and Control) is to stay out of touch with a weakened person and, as conceivable, further evade the market or open spot. However, there is no enemy of Covid antibody to forestall or treatment, but some treatment support works. Anticipated future exploration to battle with Covid. Until ‘Separation is salvation,’ and until separation is taken care of.

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