ejpmr, 2020,7(7), 939-942

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Review Article

ISSN 2394-3211

EJPMR

CURRENT SCENARIO OF SYMPTOMATIC TREATMENT AND MANAGEMENT OF COVID-19 INFECTION IN HUMAN BEING

[1]*Vishwakarma Ravi Kumar, [2]Gupta Randhir Kumar, [3]Dr. Dhrubo Jyoti Sen, [4]Tarique Hussain and [5]Bhat Asif Ahmad

[1]Arya Collage of Pharmacy Ricco Industrial Area Kucas Jaipur, Rajasthan – 302028, India.
[2]Babu Banarsi Das National Institute of Technology and Management, Chinut, Lucknow - U. P 227108, India.
[3]Department of Pharmaceutical Chemistry, School of Pharmacy, Techno India University, Salt Lake City, Sector-V, EM-4, Kolkata-700091, West Bengal, India.
[4]Glocal University-Department of Pharmacology, Delhi-Yamunotri Marg (State Highway 57) Mirzapur Pole, Dist-Saharanpur, UP-247121 India.
[5]Jadavpur University Kolkata-Department of Pharmaceutical Technology, West Bengal India.

***Corresponding Author: Vishwakarma Ravi Kumar**

Arya Collage of Pharmacy Ricco Industrial Area Kucas Jaipur, Rajasthan – 302028, India.

Article Received on 22/05/2020 **Article Revised on 11/06/2020** **Article Accepted on 02/07/2020**

ABSTRACT

Noval coronavirus disease Covid-19 is a new disease that is distinct from other SARS, MERS and influenza. identified by similar to pneumonia and influenza characters like wise sneezing, coughing, fever, cold, thatswhy spread very easy human to human via airborne droplets belong to respiratory desease. This is RNA virus, total six species have been identified to couse disease in human beings, virus enters in human cell through ACE-2 Exopeptidase Receptor. currenly all review focuses clinical information about effective mamagement, prevention and counseling of patients worldwide. Although coronavirus and influenza infection may present with similar symtomps. Covid-19 is different with respect to community severity. firstlly observed in the Wuhan country China, In response to the rapidly increasing number of publications on the emerging desease, basically it is respiratory syndrome, this review helps to understanding and eradication of the threatening infection. prerardness, readiness and response actions with continue to be driven by rapidly accumulating scientific and public health knowledge. Covid- 19 infection lower then in the most affected country significantly. WHO Advised to avoid public place and infected persons and pet animals. On 11 march 2020 WHO declared Covid-19 outbreak as a pandemic and reiterated the cell for countries to take immidiate actions and scale up response to treat, detect and reduce transmission to same peoples lives.

KEYWORDS: COVID-19, SARS-CoV-2, current scenerio, symptomic treatment management.

INTRODUCTION

COVID-19 Pandemic and epidemic disease rapid increase in the number of cases in the world. Early envestigations of WHO advised that critical in an outbreak of a new virus. The new data of Covid-19 collected from the protocol according to characterise the key Covid-19 virus transmission tendancy of virus. To detect spread, severity of disease, focused on the community and to inform operational models for implementation of case study for isolation, and contact. it is suggested that SARS-CoV-2 producing COVID-19 in humans has its origin from bats as bats acted as natural ancestral host24-28. Scanning electron microscopy, transmission electron microscopy, and cryo-electron microscopic images of the structure of the SARS-CoV-2 confirmed the change in spike glycoprotein of SARS coronavirus. Alcohol does not protect Covid-19 disease. To control the spread of Covid-19, countries have progressively introduced community wide lockdown and most effective precoution is period of quarantine for suspected public which is contracted the virus. All countries facing the Covid-19 pandemic world wide must take decision to stop the spread of the virus. The lessons from such earlier threats of SARS, MERS and of the current COVID-19 situations need to be kept in mind for formulating plans for countering such and other emerging and zoonotic pathogens that could pose pandemic threats while putting human lives at bay.

Covid-19 may appear in as few 2 days or as long as 14 days. According to CHINA's NATIONAL HEALTH COMMISSION About 80% of those who died were over the age of 60 to 75% of them had pre-existing health conditions such as Cardiovascular disease and diabetes. According to WHO Similar report no-7, median age of cases detected outside of china is 45 yrs. 71% of cases were male. Older people pre- existing medical condition such as asthma, diabetes, heart disease appear to be

severity ill with the virus.

Diagnosis of Covid-19 Virus

For prompt diagnosis of SARS-CoV-2, molecular tools are widely preferred. Serological diagnosis is not of much help at the peak of the epidemic, though serum samples of recovered patients can be tested to know the titer of IgG. In severely infected patients, computed tomography technique (CT) and X-Ray can be of help to observe the lesions of pulmonary pneumonia in the lungs in correlation with clinical symptoms to depict the picture of COVID-1937. For the diagnosis of exposed but asymptomatic carriers, detection of viral nucleic acid (RNA) is of pertinent help, and by using pharyngeal swab the viral RNA can be detected, such carriers should be kept in isolation to prevent the transmission and spread risk. Most popularly, real-time RT-PCR (rRT-qPCR) is performed over respiratory secretions so that within a short period, viral RNA can be detected.

Researchers have also developed a reverse transcriptional loop-mediated isothermal amplification (RT-LAMP) diagnostic technique for rapid and colorimetric detection of COVID-19 coronavirus. This isothermal LAMP-based method for COVID-19 detection is referred to as iLACO. In this technique, a fragment of the ORF1ab gene was amplified by using six primers, and phenol red are used as a pH indicator when amplification takes place color changes from pink to light yellow. At the same time, in negative cases, it remains pink64. In addition to that, multiple reference laboratories are progressing sequencing the complete genome from the rRT-PCR positive isolates.

Laboratory diagnosis

Respiratory specimen collection methods:

A. Lower respiratory tract

- Bronchoalveolar lavage, tracheal aspirate, sputum
- Collect 2-3 mL into a sterile, leak-proof, screw-cap sputum collection cupor sterile dry container.

B. Upper respiratory tract

- Nasopharyngeal swab AND oropharyngeal swab Oropharyngeal swab (e. g. throat swab).

Tilt patient's head back 70 degrees. Rub swab over both tonsillar pillars and posterior oropharynx and avoid touching the tongue, teeth, and gums. Use only synthetic fiberswabs with plastic shafts. Do not use calcium alginate swabs or swabs with wooden shafts. Place swabs immediately into sterile tubes containing 2-3 ml of viral transport media.

Combined nasal & throat swab

Tilt patient's head back 70 degrees. While gently rotating the swab, insert swab less than one inch into nostril (until resistance is met at turbinates). Rotate the swab several times against nasal wall and repeat in other nostril using the same swab. Place tip of the swab into sterile viral transport media tube and cut off the applicator stick. For throat swab, take a second dry polyester swab, insert into mouth, and swab the posterior pharynx and tonsillar areas (avoid the tongue).

Place tip of swab into the same tube and cut off the applicator tip. Nasopharyngeal swab.

Tilt patient's head back 70 degrees. Insert flexible swab through the nares parallel to the palate (not upwards) until resistance is encountered or the distance is equivalent to that from the ear to the nostril of the patient. Gently, rub and roll the swab. Leave the swab in place for several seconds to absorb secretions before removing.

a. Give supplemental oxygen therapy immediately to patients with SARI and respiratory distress, hypoxaemia, or shock: Initiate oxygen therapy at 5 L/min and titrate flow rates to reach target SpO2 ≥90% in non-pregnant adults and SpO2 ≥92-95 % in pregnant patients. Children with emergency signs (obstructed or absent breathing, severe respiratory distress, central cyanosis, shock, coma or convulsions) should receive oxygen therapy during resuscitation to target SpO2 ≥94%; otherwise, the target SpO2 is ≥90%. All areas where patients with SARI are cared for should be equipped with pulse oximeters, functioning oxygen systems and disposable, singleuse, oxygen -delivering interfaces (nasal cannula, simple face mask, and mask with reservoir bag). Use contact precautions when handling contaminated oxygen interfaces of patients with COVID – 19.

b. Use conservative fluid management in patients with SARI when there is no evidence of shock: Patients with SARI should be treated cautiously with intravenous fluids, because aggressive fluid resuscitation may worsen oxygenation, especially in settings where there is limited availability of mechanical ventilation. c. Give empiric antimicrobials to treat all likely pathogens causing SARI. Give antimicrobials within one hour of initial patient assessment for patients with sepsis: Although the patient may be suspected to have COVID - 19, Administer appropriate empiric antimicrobials within ONE hour of identification of sepsis. Empirical antibiotic treatment should be based on the clinical diagnosis (community-acquired pneumonia, health care-associated pneumonia [if infection was acquired in healthcare setting], or sepsis), local epidemiology and susceptibility data, and treatment guidelines. Empirical therapy includes a neuraminidase inhibitor for treatment of influenza when there is local circulation or other risk factors, including travel history or exposure to animal influenza viruses. Empirical therapy should be de-escalated on the basis of microbiology results and clinical judgment d. Do not routinely give systemic corticosteroids for treatment of viral pneumonia or ARDS outside of clinical trials unless they are indicated for another reason: A systematic review of observational studies of corticosteroids administered to patients with SARS reported no survival benefit and possible harms (avascular necrosis,

psychosis, diabetes, and delayedviral clearance).

A systematic review of observational studies in influenza found a higher risk of mortality and secondary infections with corticosteroids; the evidence was judged as very low 9 to low quality due to confounding by indication. A subsequent study that addressed this limitation by adjusting for time-varying confounders found no effect on mortality. Finally, a recent study of patients receiving corticosteroids for MERS used a similar statistical approach and found no effect of corticosteroids on mortality but delayed lower respiratory tract clearance of MERS-CoV. Given lack of effectiveness and possible harm, routine corticosteroids should be avoided unless they are indicated for another reason. See section F for the use of corticosteroids in sepsis.

Prevention and Management A)Practice Social Distancing

Avoid gatherings such as melas, haats, gatherings in religious places, social functions etc.

Maintain a safe distance of at least one Metre between you and other people when in public places, especially if they are having symptoms such as cough, fever etc.

To avoid direct droplet contact. Stay at home as much as possible.

Avoid physical contact like handshakes, hand holding or hugs.

Avoid touching surfaces such as table tops, chairs, door handles etc.

B) Practice good hygiene

Wash your hands frequently using soap and water After coming home from outside people especially if they are ill. After having touched your face, coughing or sneezing.

Before preparing food, eating or feeding children. Š

Before and after using toilet, cleaning etc.

Do not Spit or shout in public places to avoid the spread of droplets. Do not touch your eyes, nose and mouth with unclean hands.

Ensure that the surfaces and objects are regularly cleaned.

Drugs Chloroquine and hydroxychloroquine their mechanism of action. chloroquine is a proven anti-malarial drug that has the capability

inhibiting the replication of several intracellular micro-organisms including coronaviruses *in vitro*.

Remdesivir Ribavirin

CONCLUSION

Firstly we have to observe that Quarentine and social distancing is very best management for covid-19 according to new research, after that systemic symptoms. many aspects, derived from the research, are still to be developed, as is the case that facing the pandemic of COVID- 19 many elements in certain age groups to fight infection . Individual presenting symptoms vary widely but in combination anosmia, fever, fatigue, persistent cough, diarrhoea, abdominal pain and loss of appetite have a reasonable specificity for COVID-19 diagnosis, though average sensitivity. Symptoms can have rapid cessation or late onset and some people will also be asymptomatic. Fever (< 39.1 °C) and cough are the most frequent symptoms even in mild disease, but relying on cough to diagnose COVID-19 may be misleading as it was observed in less than half of the mild cases in the largest studies of this seen.

REFERENCES

1. Ramadan N, Shaib H. Middle East respiratory syndrome coronavirus (MERS-CoV): A review. *Germs*, 2019; **9**(1): 35-42. https://doi. org/10. 18683/germs. 2019. 1155.
2. Zhou P, Yang XL, Wang XG, Hu B, Zhang L, Zhang W *et al.* A pneumonia outbreak associated with a new coronavirus of probable bat origin NATURE, 2020.
3. Technical queries related to COVID-19 may be emailed at technicalquery. covid19@gov. in and other queries.
4. Zhang H, Zhou P, Wei Y, Yue H, Wang Y, Hu M, Zhang S, Cao T, Yang C, Li M, Guo G, Chen X, Chen Y, Lei M, Liu H, Zhao J, Peng P, Wang CY, Du R. Histopathologic Changes and SARS-CoV-2 Immunostaining in the Lung of a Patient With COVID-19. Ann. Intern. Med, 2020 May 05; 172(9): 629-632. [PMC free article] [PubMed]
5. For all authentic & updated information on COVID-19 related technical issues, guidelines & advisories please regularly visit: https://www. mohfw. gov. in/.
6. Lei J, Kusov Y, Hilgenfeld R. Nsp3 of coronaviruses: Structures and functions of a large multi-domain protein. Antiviral Res, 2018 Jan; 149: 58-74. [PMC free article] [PubMed]
7. European centre for disease prevention and control paediadtric inflammatory multisystem syndrome and SARS COV-2 infection in children.
8. Conti P, Ronconi G, Caraffa A, Gallenga CE, Ross R, Frydas I, Kritas SK. Induction of pro-inflammatory cytokines (IL-1 and IL-6) and lung inflammation by Coronavirus-19 (COVI-19 or SARS- CoV-2): anti-inflammatory strategies. J. Biol. Regul. Homeost. Agents, 2020 Mar 14; 34(2) [PubMed]
9. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, Zhang L, Fan G, Xu J, Gu X, Cheng Z, Yu T, Xia J, Wei Y, Wu W, Xie X, Yin W, Li H, Liu M, Xiao Y, Gao H, Guo L, Xie J, Wang G, Jiang R, Gao Z, Jin Q, Wang J, Cao B. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet, 2020 Feb 15; 395(10223): 497-506. [PMC free article] [PubMed]
10. Matics TJ, Sanchez-Pinto LN. Adaptation and Validation of a Pediatric Sequential Organ Failure Assessment Score and Evaluation of the Sepsis-3 Definitions in Critically Ill Children. JAMA Pediatr, 2017 Oct 02; 171(10): e172352. [PMC free article]

[PubMed]
11. Lauer SA, Grantz KH, Bi Q, Jones FK, Zheng Q, Meredith HR, Azman AS, Reich NG, Lessler J. The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and Application. Ann. Intern. Med, 2020 May 05; 172(9): 577-582. [PMC free article] [PubMed]
12. Chen Y, Liu Q, Guo D. Emerging coronaviruses: Genome structure, replication, and pathogenesis. J. Med. Virol, 2020 Apr; 92(4): 418-423. [PMC free article] [PubMed]
13. Tian S, Hu N, Lou J et al., Characteristics of COVID-19 infection in BeXuijing. Journal of Infection [Internet]. 2020 Feb [cited 2020 Mar 23]; 80: 401–406 DOI: https://doi. org/10. 1016/j. jinf. 2020. 02. 018.