

Editorial



Novel Corona Virus Disease (COVID-19)-A Pandemic Outbreak

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The world is fighting against a global viral pandemic of zoonotic origin yet again. This time it is COVID-19, the 7th and newest strain of coronavirus previously named as novel coronavirus 2019. WHO was first alerted to several cases of pneumonia in Wuhan City, Hubei province of China on 31 December 2019.¹ One week later, on 7 January, Chinese authorities confirmed that they had identified a new strain of corona virus family. WHO declared coronavirus infection as pandemic on 11th March 2020 and stated that the virus will likely spread to all countries on the globe. As of 22nd March 2020, nearly 857,641 cases and 42,006 deaths have been reported in 206 countries. In the beginning of the outbreak, China was the most affected country, but numbers of new cases and deaths are on the rise in like Italy, Spain, USA and Iran. Bangladesh has a total 54 confirmed cases of so far and more than 30,000 are quarantined in hospital and at home.²

Corona viruses are a larger family of viruses that causes a wide range of illness from the common cold to more severe disease like Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS). A novel Corona Virus (nCoV) is a new strain that has not been previously identified in humans. But the mortality and morbidity of this new strain is beyond imagination and the mode of transmission being mostly similar to previous strains as droplets sprayed by affected individuals, contact with patient respiratory secretions, contaminated surfaces, fomites and equipment, however airborne infection is not documented so far. The incubation period is ranging from 1 to 12.5 days (median 5-6 days). More information needed to ascertain whether transmission can occur from asymptomatic individuals or during the incubation period.³

Early clinical presentation includes fever (>38°C), respiratory symptoms like cough, shortness of breath, runny nose, fatigue, malaise, nausea/vomiting, diarrhea and headache. Later scenario is complicated by development of bilateral pneumonia, bronchitis progressing to acute respiratory distress syndrome. However any patient with acute respiratory illness and history of travel to or residence in any of infected countries in 14 days prior to symptom onset or close contact with a confirmed / suspected case of COVID-19 in the 14 days prior to symptom onset or healthcare worker taking care of confirmed/suspected patients of COVID-19 should be suspected as probable case.⁴ The epidemiological link may have occurred within a 14-days period before or after the onset of illness in the case under consideration. A suspected case is for whom testing for COVID-19 is inconclusive or for whom

testing was positive on a pan coronavirus assay. A confirmed case is a person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms. For testing purpose respiratory material (nasopharyngeal, oropharyngeal swab, sputum and/or endotracheal aspirate or bronchoalveolar lavage) are taken for confirmatory test by RT-PCR. Other supportive tests are CBC with ESR, Serum for serological testing, Biochemical investigations, Liver function test, Chest Radiograph, ECG.⁵

The primary prevention is to avoid exposure to the virus itself. People should be advised to wash hands often with soap and water or an alcohol based hand sanitizer and avoid touching the eyes, nose and mouth with unwashed hands. They should avoid close contact with people (i.e., maintain a distance of at least 1 meter (3feet) and practice respiratory hygiene. Everyone should try to avoid direct unprotected contact with live animals, surfaces in contact with live animals, raw or undercooked animal products, and handle raw meat, milk, or animal organs with care as per good food safety practices. WHO does not recommend that people wear a medical mask in community settings if they do not have respiratory symptoms. However, mask may be worn in some countries particularly in endemic areas.⁶ People travelling from areas with a high risk of infection may be screened using questionnaires about their travel, contact with ill persons, symptoms of infection, and/or measurement of their temperature. Enforced quarantine has been used in some countries to isolate easily identifiable cohorts of people at potential risk of recent exposure (e.g., groups evacuated by airplane from affected areas, or groups on cruise ships with infected people on board). As for secondary prevention, early recognition of new cases is the cornerstone of prevention of transmission. Immediately isolate all suspected and confirmed cases and implement recommended infection prevention and control procedures. Government of Bangladesh has Isolation facilities all over the country and testing for COVID-19 only available at IEDCR, Bangladesh.⁷

The management of COVID-19 infection needs to be individualized according to wide spectrum of illness ranging from uncomplicated illness, mild pneumonia, severe pneumonia, ARDS, sepsis and septic shock. General supportive measures are oxygen supplementation, fluid management, empirical antibiotics and ventilator support if required. Antiviral medicine such as Lopinavir, Ritonavir, Darunavir, Atazanavir or Oseltamivir may be considered if there is hypoxia, septic shock, acute kidney injury or high risk

group age >60 years, diabetes mellitus, chronic kidney or lung or heart conditions. If necessary, CDC also advises to use chloroquine and methylprednisolone as adjuvant therapy. Treatment is still controversial and WHO didn't release any proper guideline until to date. Patient may be discharged once there is resolution of symptoms, radiological improvement and documented virological clearance in 2 samples 24 hours apart. No vaccine is available for COVID-19 so far.⁸

Bangladesh is a densely populated country with limited health resources. The limitation is more pronounced in the Government hospitals which will become the main resource of managing COVID-19 infected patients. The ministry of health and family planning already assigned few hospitals for treatment, isolation and quarantine purpose. Quarantine facilities are being planned as at least one centre in each district. But testing kits, trained health personnel and intensive care unit with ventilatory support will be crucial in the forthcoming days. The infection rate and mortality will get unimaginable if this infection is not contained to low number. Prevention is better than cure as there is no vaccine available; the best way to prevent COVID-19 is not to get infected from others. Staying at home, frequent hand washing, avoiding contact with suspected individual and infected persons- these are mandatory. At this point everyone needs to be at home and avoid going outside unless necessary, stay at home to be safe.

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