

Health Care Workers in COVID-19 Pandemic: Saviors Need Safety

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"Ignorance is bliss".... a famous proverb...meaning if one is unaware of an unpleasant fact or situation one cannot be troubled by it. But it was altogether different for healthcare workers (HCW) in dealing with Corona patients. Here quote by Suzy Kassem, an American Poet of Egyptian origin very aptly suits the scenario that "Ignorance is not bliss. It is the Kiss of Death". Ignorance was not only the most prominent contributing factor for the spread of the lethal COVID-19 infection among public but also responsible for the mortality of HCW including doctors, nurses, intensive care technicians etc.

The outbreak of a respiratory disease having Flu-like symptoms began in Wuhan, China in December 2019 whereas causative agent was discovered very late in January 2020 to be severe respiratory syndrome corona virus 2 (SARS-CoV-2). The doctors and other HCW were routinely examining these patients in their clinics as Flu patients or Influenza like illness (ILI) patients. They were totally unaware of the causative agent and they presumed that as simple seasonal influenza virus infection. The clinicians of Wuhan had no knowledge of such an outbreak, and they saw their patients without any precautions. This was the main cause of rapid spread of the novel virus among HCW.

Liang Wudong was a physician at Xinhua Hospital in Hubei who was the first doctor to die from the COVID-19 pandemic due to nosocomial infection. Li Wenliang was a Chinese ophthalmologist who worked at Wuhan Central Hospital. He was a whistleblower of suspected SARS outbreak but unfortunately died from the disease on 7 February 2020, at age 33. Liu Fan was a deputy chief nurse of Wuchang Hospital in Wuhan, Hubei, China. She was the first nurse to die from SARS-CoV-2 infection, at the age of 59 [1].

Similarly, in Italy, the Covid-19 pandemic started at the same time as the annual flu season. Many general practitioners continued to see patients as if they were victim of minor flu without taking standard precautions. Ignorance about the extent of local spread of Covid-19 amounts lot many deaths of HCW with a higher percentage of the infected healthcare workers being women because of their predominance among nurses [2]. By the end of April, more than 145 doctors in Italy had died with COVID-19 [3]. So, from the first two confirmed case of Covid-19 on 31 January 2020 from Rome, it took only 2 months to cause such a huge loss of HCW.

In Spain, doctors were not properly informed early of the extent of spread, hence did not take adequate precautions. Dr. Francesc Collado Roura was the first health officer killed by Covid-19, on March 18 in Barcelona, although his case was not known until 30th March 2020 [4]. Patients with a fever or cough or unspecific symptoms went to his doctor, who saw them at home or in his office, and that's where the contagion happened. That's why there were so many family physicians that got infected.

The COVID-19 virus infected Spain's health workers at a faster rate than any other country, with around 15% of its almost 125,000 total cases being doctors, nurses and other medical staff. The health workers had been exposed to contagion due to a shortage of medical

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supplies, with nurses and doctors being forced in some cases to patch together makeshift protection suits using plastics such as garbage bags [5].

The International Council of Nurses (ICN) said Wednesday that it believes at least 90,000 healthcare workers had been infected and more than 260 nurses had died in the novel corona virus pandemic. Failure by governments to record infection rates and deaths of healthcare staff is a scandal that puts staff at higher risk and underestimates the true scale of the problem, the ICN said in a statement released in Geneva [6].

In India Corona virus has infected around 548 doctors, nurses and paramedics across the country so far, according to data maintained by the Centre, official sources said on 06 May 2020. The figure does not include field workers, ward boys, sanitation workers, security guards, lab attendants, peons, laundry and kitchen staff among others. According to an official source, it has not been ascertained from where these doctors, nurses and paramedic staff have acquired the infection. The figure includes doctors, nurses and paramedics from Centre-run and state government-run facilities across states and union territories [7].

Large number of the infections that affected HCW is from preventable factors. In fact HCW underestimated the pandemic and this was the universal mistake across the world. Universal or Standard Precaution was not in a habit of HCW therefore they contracted infection so vigorously. They saw their patients without adopting basic healthcare norms, etiquettes and precautions. They took lightly the situation and were very casual in seeing the patients of flu. Surprisingly this happened in the developed and well-equipped countries.

Contrary to China and Europe, HCW at Singapore strictly adhered to standard precautions and have had no outbreak among them. Kangqi., et al. from Changi General Hospital, Singapore described that 85% of health care workers were exposed during an aerosolgenerating procedure while wearing a surgical mask, and the remainder were wearing N95 masks. That none of the health care workers in this situation acquired infection suggests that surgical masks, strict hand hygiene, and other standard precaution protected them from being infected [8].

Other contributing factors include lack of testing facilities, denial and underreporting the pandemic, lack of periodic surveillance testing of HCW, exposure of HCW to aerosol generating procedures such as emergency intubation etc. without proper and adequate personal protective equipments (PPE), shortage of PPE, inappropriate use of PPE, unauthorized reuse and substandard PPE.

Doctors who see large volume of patients especially in short span of time are more vulnerable to have infection. Inefficient triage contributes a lot in contracting such infection particularly in outpatient department. In fact, proper triage is a major tool to filter the suspected patients to go in to proper outpatient department, thus reducing the chances of infection further. Thermal scanning of body temperature, Hand hygiene, wearing mask with covered nose and mouth and social distancing are the powerful tool to spread the infection in healthcare facility particularly. Healthcare facilities (HCF) can have significant infection control by implementing these facilities with proper signages and trained staff.

Government of India through Ministry of Health and Family Welfare imposed mandatory training of Infection Prevention Control (IPC) to all doctors who have standalone clinics and all single/multispeciality HCF. IPC committee has been constituted in all the HCF and government is taking regular follow-up of IPC management through his district level authorities. With so much of rigorous efforts and proper implementation of country lock down, India could succeed to restrict Covid-19 infection in a significant manner as compared to world.

I strongly believe that "doctors themselves are the most neglected patient worldwide" because they are by default careless for their own health. Likewise, other associated HCW like nurses, ward boys, technicians are also very casual in their day to day job. Taking care of IPC management is therefore most crucial among these groups. After the advent of human immunodeficiency virus (HIV) infection, our community got sensitized with the universal precautions specially exposure to blood, semen etc. But respiratory etiquette is still need

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to be inculcated in our habits. As doctors and HCW do many things on patients in their daily routine; they cannot always be aware of the patient's condition and their protective gears. Therefore, I believe that wearing surgical masks, strict hand hygiene, and procedure/situation based use of PPE will not only protect the HCW from any infection but also save their lives that are certainly most important as they are savior and warrior both. I have started my writing with the quote of Suzy Kassem and would like to conclude with her another quote "Sometimes we have to soak ourselves in the tears and fears of the past to water our future gardens".

Bibliography

- Chen G and Levy D. "Contributions of the Framingham Heart Study to the Epidemiology of Coronary Heart Disease". JAMA Cardiology 1.7 (2016): 825-830.
- 2. Reynolds K., *et al.* "Trends in Incidence of Hospitalized Acute Myocardial Infarction in the Cardiovascular Research Network (CVRN)". *The American Journal of Medicine* 130.3 (2017): 317-327.
- 3. Braunwald E., *et al.* "Rationale and Clinical evidence for the use of GP IIb/IIIa inhibitors in acute coronary syndromes". *European Heart Journal* 19 (1998): D22-D30.
- 4. Cannon CP and Greenberg BH. "Risk stratification and prognostic factors in the post-myocardial infarction patient". *The American Journal of Cardiology* 102 (2008): 13G-20G.
- 5. Huikuri HV., *et al.* "Prediction of fatal or near-fatal cardiac arrhythmia events in patients with depressed left ventricular function after an acute myocardial infarction". *European Heart Journal* 30 (2009): 689-698.
- 6. Kuriachan V and Exner DV. "Role of risk stratification after myocardial infarction". *Current Treatment Options in Cardiovascular Medicine* 11 (2009): 10-21.
- 7. Goldenberg I., *et al.* "Corrected QT variability in serial electrocardiograms in long QT syndrome: the importance of the maximum corrected QT for risk stratification". *Journal of the American College of Cardiology* 48 (2006): 1047-1052.
- 8. Tse G and Yan BP. "Traditional and novel electrocardiographic conduction and repolarization markers of sudden cardiac death". *Europace* 19 (2017): 712-721.
- 9. Gimeno-Blanes FJ., et al. "Sudden cardiac risk stratification with electrocardiographic indices: A review on computational processing, technology transfer, and scientific evidence". Frontiers in Physiology 7 (2016): 82.
- 10. Abdelghani SA., et al. "Surface electrocardiogram predictors of sudden cardiac arrest". Ochsner Journal 16 (2016): 280-289.
- 11. Dekker JM., *et al.* "Heart rate-corrected QT interval prolongation predicts risk of coronary heart disease in black and white middleaged men and women: the ARIC study". *Journal of the American College of Cardiology* 43 (2004): 565-571.
- 12. Goldenberg I., et al. "Corrected QT variability in serial electrocardiograms in long QT syndrome: the importance of the maximum corrected QT for risk stratification". Journal of the American College of Cardiology 48 (2006): 1047-1052.
- 13. Jimenez-Candil J., et al. "Short and long-term prognostic value of the corrected QT interval in the non-ST-elevation acute coronary syndrome". Journal of Electrocardiology 40 (2007): 180-187.
- 14. Castro Hevia J., *et al.* "Tpeak-Tend and Tpeak-Tend dispersion as risk factors for ventricular tachycardia/ventricular fibrillation in patients with the Brugada syndrome". *Journal of the American College of Cardiology* 47 (2006): 1828-1834.
- 15. Kanters JK., et al. "Tpeak Tend interval in long QT syndrome". Journal of Electrocardiology 41 (2008): 603-608.
- 16. Kors JA., et al. "The meaning of the Tp-Te interval and its diagnostic value". Journal of Electrocardiology 41 (2008): 575-580.

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- 17. Yan GX., *et al.* "Ventricular repolarization components on the electrocardiogram: cellular basis and clinical significance". *Journal of the American College of Cardiology* 42 (2003): 401-409.
- 18. Yan GX and Martin J. "Electrocardiographic T wave: a symbol of transmural dispersion of repolarization in the ventricles". *Journal of Cardiovascular Electrophysiology* 14 (2003): 639-640.
- 19. Antzelevitch C., *et al.* "Does Tpeak-Tend provide an index of transmural dispersion of repolarization?" *Heart Rhythm* 4 (2007): 1114-1116.
- 20. Gupta P., et al. "Tp-e/QT ratio as an index of arrhythmogenesis". Journal of Electrocardiology 41 (2008): 567-574.
- 21. Shu J., *et al.* "Tp-e/QT ratio as a predictive index of sudden cardiac death in patients with ST-segment elevation myocardial infarction". *Journal of Xi'an Jiaotong University Medical Sciences 31* (2010): 441-443.
- 22. Zhao X., et al. "Association Between Tp-e/QT Ratio and Prognosis in Patients Undergoing Primary Percutaneous Coronary Intervention for ST-Segment Elevation Myocardial Infarction". *Clinical Cardiology* 35.9 (2012): 559-564.
- 23. Wang X., *et al.* "Tpeak-Tend/QT interval predicts ST-segment resolution and major adverse cardiac events in acute ST-segment elevation myocardial infarction patients undergoing percutaneous coronary intervention". *Medicine* 97 (2018): e12943.
- 24. Yan GX., *et al.* "Phase 2 reentry as a trigger to initiate ventricular fibrillation during early acute myocardial ischemia". *Circulation* 110 (2004): 1036-1041.
- 25. Arvenpää J., et al. "Changing capacity of electrocardiographic ventricular repolarization in postmyocardial infarction patients with and without nonfatal cardiac arrest". The American Journal of Cardiology 99 (2007): 295-299.
- Hetland M., et al. "A novel ECG-index for prediction of ventricular arrhythmias in patients after myocardial infarction". Annals of Noninvasive Electrocardiology 19 (2014): 330-337.

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