SHORT COMMUNICATION

Environmental Impact of COVID-19 Epidemic and Biomedical Waste

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The recent coronavirus disease 2019 (COVID-19) pandemic has impacted the environment globally in both positive as well as negative manner. With global restrictions, there were clean beaches, decreased concentrations of many pollutants, including nitrogen dioxide (NO_2) and particulate matter (PM) 2.5, and reduced environmental noise level, to name a few.[1,2]

However, as the pandemic progressed there was huge generation and accumulation of medical and many other types of wastes.[2,3]

Medical face masks were dumped into the water bodies and now there is huge concern related to microplastic pollution and its impact on human health and environment.[4-6]

Because of the increase in demand, there will be almost 20% increase in production of face masks annually between 2020 and 2025.[7] As per one estimate, every month approximately 200 billion face masks and gloves were thrown into the environment.[4] During the COVID-19 pandemic, face masks and many other types of personal protective equipments (PPEs) have been widely used.

Therefore, there has been a huge mix of domestic waste with these relatively plastic rich non-biodegradable items; a cause of serious long-term concern for both aquatic and terrestrial life.[4,8]

For example, a single PPE contains around 20-25% by weight of plastic and if this not recycled or managed safely, it can cause damage to the environment. If disposed in an unsafe way, it will lead to emission of dioxins and heavy metals.[9] It can lead to contamination of the environment, particularly in the form of microplastics. The best way to prevent plastic-related damage to the environment and health is rational use of PPE, strategies to minimize the need of PPE kits and safe disposal of used PPE kits, i.e., thermal destruction.[4,10] Reusing and recycling of PPE kits and the use of washable and reusable face masks can be sustainable alternatives.[7]

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