

GUEST EDITORIAL

Medical and Cultural Ethics for Deceased with COVID-19 for Performing the Postmortem or Religious Rituals and Burial in any Graveyard

Shahzadi Zain¹, Mulazim Hussain Bukhari², Khalid Mahmood³

KEYWORDS: COVID-19, PPE, Immune system, Post mortem.

How to Cite This:

Zain S, Bukhari MH, Mahmood K. Medical and cultural ethics for deceased with COVID-19 for performing the postmortem or religious rituals and burial in any graveyard. *Biomedica*. 2020; 36 (COVID19-S2): 15-8.

The Coronavirus disease-19 (COVID-19) pandemic has brought disruption and uncertainty in everyday human life. It is a new infection that has gripped almost the whole world, as it is not sparing anyone on the basis of color, race, age, region, gender, social status, religion, or any other discriminatory factor. It is not sparing any segment of the society. It has affected the upper and lower stratum of society alike. This situation has posed a great question: how to deal with the dead body of the person who dies due to this infection? Will it spread to the living people through the affected ones' dead body?

Our simple answer is no, let's see why? These are very important questions, after answering these questions, it will be ethically right to perform religious rituals for them. This brief communication is based on observations and thorough literature

review and is not based on any original research. To answer the above-mentioned questions let's look at the transmissibility characteristics of Coronavirus in the light of literature.

Virus enters human body through respiratory tract and it lives within alive patient's breath, sneeze, sputum, or mucus secretions, and its nanoparticles spread through these respiratory secretions. The Coronavirus is neither transmitted from the blood nor from food. These nanoparticles can be functional at any level for several hours. The virus is dead outside the human body it rises and resumes its multiplication once it enters the human body. The presence of this virus has not been seen in any other organ of the body either. On the basis of these facts, hematologists are allowing blood transfusions from the Coronavirus patient to needy ones, because these viruses are not seen in the blood, as seen in case of hepatitis B or C viruses. Although virus is not found in infected persons' blood, however, RNA and anti-SARS-CoV antibody (IgG type) have been detected in healthy recipients of this transfusions.¹⁻²

How Does a Virus Fight Our Immune System?

The Coronavirus starts its journey from nose, mouth or eyes epithelial cells and reaches the alveoli of the lungs. The alveoli are lined by two types of cells: type I and type II, covered by the capillaries. Red Blood cells within these capillaries

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1. Shahzadi Zain
Schulich School of Medicine & Dentistry, Western University
Ontario, Canada.
 2. Mulazim Hussain Bukhari
Department of Pathology
University College of Medicine, University of Lahore-Pakistan.
 3. Khalid Mahmood
Department of Pathology, University College of Medicine
University of Lahore-Pakistan.

Correspondence to:
Dr. Shahzadi Zain
University of Western Ontario, London, Ontario, Canada.
Email: shahzadzain.z@gmail.com

release their CO₂ and pick up the O₂. The type I cells are thin enough to allow gaseous exchange easily. The type II cells release surfactant and keep the alveoli patent. Coronavirus, through its spikes, attaches itself with the ACE-2 receptors which are mainly present on type II alveolar cells. This attachment allows the virus to gain entry in the cells. When the virus attaches to the type II cells this normal mechanism is destroyed. The virus injects its RNA into nucleus, hijacks the cell's multiplication system, uses it to prepare its own RNA and release more RNA to infect other cells. The host cells are destroyed in this process and the virus gets free to attack other cells. When they attack the cells, their capacity to synthesize interferons (inflammatory marker) is destroyed and without competition, viral RNA attacks other cells. When type II alveolar cells are infected, they release inflammatory signals, which recruit macrophages (immune cells). These macrophages release more cytokines, which cause vasodilation to recruit more immune cells to the site of injury and exit the capillaries.^{3,4}

Remember, the virus does not have any toxins, but its antigens are present in human blood, which produce IgM and then IgG type of antibodies and if this convalescent plasma containing antibodies is given to other patients, they recover because of passive immunization.⁵

When a Person Dies, Where Does the Virus Go?

No doubt, the pneumonia-like virus is highly contagious – just one case of the COVID-19 can lead to thousands of more cases. But so far, there is no evidence that the dead body can spread virus. Unlike Ebola infection that makes the dead body highly contagious, when a person dies of Coronavirus, all the germs inside the body die after some time.^{1,6} Current knowledge suggests that the virus spreads in close vicinity of living affected person (i.e., within about 6 feet or 2 meters) when it is possible to project the respiratory droplets like influenza and other respiratory viruses. The dead man does not breathe to project virus outside like the living person does. Now the dying person cannot breathe, cough, or sneeze, nor do his/her infected secretions come out of breath. Viruses survive for a while like at all other levels.^{6,7}

What Should Be Done to the Germs that Are Applied to Body?

It is a well-known fact that if we wash our hands, the virus thriving on the hand dies, so if a deceased person is given a bath, then all the viruses left on the body will be washed away. However, precautions should be taken by not touching the body. There is no cure or vaccine for this particular virus and the only line of defense we have is physical isolation and social distancing.³

The body should be washed with simple water at least three times, as soon as possible, after the death. The steps of the washing should be followed at least three times as well. Starting from the head, then upper right side, upper left side, lower right side, and lower left side should be washed in sequence. Camphor, generally used in washing dead bodies (as it was used as a fumigant following the era of the Black Death), if used, should be cleaned off completely. After washing, the body should be immediately wrapped in a simple cloth to respect the dignity of the deceased. The body should then be transported to the mosque or cemetery.⁶

While bathing, people should wear Personal Protective Equipment (PPE), as advised to wear during the post-mortem of such persons, however, N-95 is not required during the washing of body. Postmortem is not routinely done in Pakistan for the persons who die with COVID-19. After the bath, the body becomes more secure as it is shrouded. Although the body should not be left out for too long to let the decomposition start and lung tissue to start coming out through nose or mouth, hastened disposal of the dead body is not advised either. The burial of the deceased should also be done in a normal way.

What are the Precautions for Bathing and Doing Postmortem?

The safety of medical and non-medical persons attending the bodies should be the primary goal. Same standard operational precautions should be adopted for shifting the body from hospital ICU for postmortem or burial. When a body is sifted for mortuary of graveyard, remove all of the lines, catheters and other tubes. The body must be wrapped in clean cloth and transferred as

soon as possible to the washing rooms for burials as it is not legal to perform postmortem of every person dying with COVID-19 in Pakistan. Disinfecting the body is not necessary before transfer to washing and burial areas. There is no need to use the special transport equipment or vehicle for such bodies.^{2,3,5,6}

People who perform the autopsy should do it in a specific room that does not let the air out i.e. negatives pressure. If an aerosol-generating procedure is needed, a parapet respirator (N95 mask or FFP2 or FFP3 or its equivalent) should be used.⁷

These masks are not necessary for washing the body for burial, for that, a bathroom can also be used and wearing the proper PPE kits, including a scrape suit, long-sleeved liquid-resistant gown, gloves (either two or one pair of post-mortem gloves), and face shields (preferably) or spectacles, and shoes. For bathrooms, surgical masks and protective clothing and white springs are enough. All these dresses should be worn in front of the relatives and with their consent. Alternatively, wear shoe covers, perform hand hygiene, put on a gown, put on the facemask and safety goggles as well as surgical gloves.^{6,7,8}

Giving Honour to the Departing Human Body

After washing the body, the room must be washed and cleaned. A disinfectant with a minimum concentration of 0.1% (1000 ppm) sodium hypochlorite (bleach), or 70% ethanol should be sprayed after removing the body from the washing house. Transport the dead body to the cemetery for funeral prayers. It is important to maintain social distance and wear masks during the last rituals so that people around do not get infected with the virus. You do not have any risk, not even one percent while bathing the body. Therefore, when a person dies from the world, he or she should be honorably sent to the destination and their religious rituals should be fulfilled accordingly. However, children, elderly and those who are suffering from any co-morbidities should be kept away from the funeral. Should not just dig a pit and throw it inside. The Munkers-o-Nakeers (angels who audit persons' worldly deeds after death according to Islamic belief) will come to him in the grave; hence, the grave should be prepared in an

Islamic way. The family should restrict the other worldly rituals, such as qulkhani gatherings, chehnam gatherings, etc. There is absolutely no contraindication to reciting "Quran" as long as social distancing measures are followed. There are no contraindications to other rituals such as delivering food to the poor and needy and those staying home due to lockdown, buying PPE kits to donate, or helping pay test fee for poor patients.

CONFLICT OF INTEREST

None to declare.

FINANCIAL DISCLOSURE

None to disclose.

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Author's Contribution:

SZ: Conception, design of study and acquisition of data.

MHB: Critical review and intellectual input.

KM: Data analysis and interpretation.

Dr. Shahzadi Zain, MBBS (KEMU), MPH (UWO), Physician Assistant, Mavis Wellness, Canada, is a young researcher with keen interest in knowledge translation especially in areas of emerging infectious diseases. She has authored a teaching case on Lyme disease for Schulich School of Medicine and Dentistry, Western University and has published editorials and scoping reviews in various international journals.

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