

Burial of Covid-19 deceased is safe

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Countries that insist on cremation of those dying with Covid-19 risk alienating Moslem and Christian citizens.

With different views being expressed on the debate of cremation versus burial of those who die of COVID-19, *the Sunday Times* sought the expert opinion of Prof. Malik Peiris, Professor of Virology at the School of Public Health, Hong Kong University (HKU), to get the scientific facts straight.

This is what Prof. Peiris, who is a clinical and public health virologist with a particular interest in influenza and coronaviruses (SARS-CoV, MERS-CoV and SARS-CoV-2) and Director of the World Health Organization (WHO) Reference Laboratory for providing confirmatory testing for COVID-19 at HKU states:

- Basic fact - viruses cannot replicate in dead cells. Thus viral replication stops with death and residual infectious virus begins to die gradually.
- The infectiousness of a patient is maximal during the 2-3 days BEFORE the onset of symptoms and for 4-5 days soon after the onset of symptoms. Since most patients die later in the course of the illness (usually Week 2 or later), they are much less contagious at the time of death.
- It is important to note that a positive RT-PCR does NOT mean infectious virus. Only growing the virus would prove the presence of an infectious virus. This is why the WHO has advised, and Sri Lanka has accepted, the recommendation that recovered patients can be discharged from hospital isolation after 10-14 days of symptom-onset even if they still continue to be RT-PCR positive. The WHO recommends discharge 10 days after symptom-onset. So an RT-PCR becoming positive does not mean there is infectious virus.
- COVID-19 is a disease transmitted by the respiratory route. It is NOT a water-borne disease. There is no evidence of transmission by water, so far. However, as a precaution, it would make sense to avoid unnecessary contamination of water by ALL pathogens, which include typhoid, cholera, shigella or other diarrhoeal diseases. COVID-19 is not at the top of the list that we need to worry about in regard to water-borne diseases. If the water table is very high in some areas of the island, we should not have cemeteries in such locations. But it is equally absurd to state that there is no part of the island where it is safe to bury people with contagious diseases, including typhoid, cholera, shigella or COVID-19.
- Burial in impervious wrapping and with disinfectant chemicals added to the soil should reduce the risk of any residual infectious virus leaking out from the dead body in a viable form.
- If there is any residual infectious virus that may leak from the dead body, it will get filtered by the soil as these secretions percolate through the soil.
- Hypothetically, if there are tiny amounts of infectious virus that escape all these barriers and enter the groundwater (extremely unlikely), they would get diluted because of the large volume of groundwater. You need to keep in mind that a single infectious virus will not initiate a COVID-19 infection. You need to receive a fairly large dose of infectious virus. Compared to getting infected by the respiratory route, it is very likely that this infectious dose is even larger if it is ingested with water, as most of it will go direct to the stomach and be killed by gastric

acidity rather than impinge on the respiratory epithelial cells which are most susceptible to the virus, which is what happens with air-borne transmission.

- Indeed if there is such a great risk with regard to groundwater contamination, because of some unusual geological features in Sri Lanka, the groundwater table would already have been contaminated quite heavily because the COVID-19 virus is present in the faeces of infected persons. Most people who have COVID-19 are not diagnosed for days or a week or more after the onset of infection during which time they are excreting faeces containing the virus, likely more infectious than any virus found in a dead body. Since most people in Sri Lanka use soakage pits for sewerage disposal and many people continue to use these facilities prior to being diagnosed with COVID-19 and isolated, if the water table contamination is a problem, it has happened many times already.
- Since we are told that all or most COVID-19 patients can be tracked to existing clusters of cases (i.e. no “community transmission”), it does not appear that this potential source of transmission via contaminated water has taken place. If so, why are we so concerned about a much more limited and contained, hypothetical and negligible risk of contaminating the water table through burial?
- No one recommends burying a body in or close to the water table for the reasons I have stated above - more for other infectious diseases rather than COVID-19. **But it is absurd to say that there are NO parts of Sri Lanka where the water table is sufficiently below ground level that burial is possible safely.**

Categorically, Prof. Peiris states: “When you take all these factors into consideration, it is not scientific to state that there is no place in Sri Lanka where it is possible to safely bury a patient dying with COVID-19. This is exactly why the WHO and many other countries allow flexibility in burial practice to accommodate personal beliefs. It is sensible to take some precautions - including identifying which areas in the country such burial is possible safely and the precautions that need to be taken (impervious covering and use of chemical disinfectants). But to state that safe burial is not possible anywhere in Sri Lanka is not scientific.

“Control of communicable diseases (like COVID-19) requires more than ‘regulations’. It requires securing community participation. This was a clear lesson learned during the Ebola crisis in West Africa in 2014. When there are unreasonable restrictions placed on communities, you run a high risk of losing community support for control measures and this can backfire resulting in adverse consequences for control.

“I fear that this dispute on burial for those who have strong religious beliefs in this regard, is already leading to increased transmission because of the loss of community participation in sections of the affected community. So, rather than reducing risk, this policy is ALREADY INCREASING the risk.”

Former Chief Epidemiologist pulls out expert guidelines which indicate there’s no danger in burials

The debate on the burial versus cremation of those who die of COVID-19 continues, though the science seems to be clear.

While the health authorities hide behind a so-called decision of an ‘expert technical committee’, the Sunday Times looked at the scientific evidence for an answer.

The WHO is unequivocal on the matter that anyone who dies of COVID-19 could be buried or cremated, the Sunday Times learns.

Former Chief Epidemiologist Dr. Nihal Abeysinghe quotes four reports, three from the WHO and the

fourth from the International Society for Infectious Diseases, which all indicate that there is no danger in burying the body of a person who has died of COVID-19.

The reports are: the WHO's Interim Guidance on 'Infection prevention and control for the safe management of a dead body in the context of COVID-19' issued on March 24, this year, the Interim Guidance on 'Practical considerations and recommendations for religious leaders and faith-based communities in the context of COVID-19' of April 7 & the Interim Guidance on 'Infection prevention and control for the safe management of a dead body in the context of COVID-19' of September 4; and the 'Guide to Infection Control in the Healthcare Setting - The Infection Hazards of Human Cadavers' of 2018 but relevant to the current pandemic. (All four documents may be viewed on our web: sundaytimes.lk)

From the very first WHO guideline, it is clear that there is no danger of a COVID-19 virus spread from burying a deceased, says Dr. Abeysinghe quoting, "It is a common myth that persons who have died of a communicable disease should be cremated, but this is not true. Cremation is a matter of cultural choice and available resources.....To date, there is no evidence of persons having become infected from exposure to the bodies of persons who died from COVID-19."

Another very pertinent question raised by Dr. Abeysinghe is how no one speaks of the urine and faeces passed by those who are COVID-19 positive while in hospital.

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