

The Handling of Dead Bodies of the Confirmed COVID-19 Patients during Pandemic

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ABSTRACT

I found Italian interim guidelines for workers possibly came in contact with material from carcass, including body's serum, in morgue susceptible places and during autopsy practice for employees came in close proximity the stuff from corpses, including body fluids, in morgue and structures and during autopsy. To be particularly intriguing. In truth, the treatment of deceased bodies is a serious issue that is rarely discussed. It's possible that the illness will spread from the practitioner's body to other persons who come into touch with it. The first possible example of COVID-19 transmission from a corpse, as reported by Sriwijitalai and Wiwanitkit, demonstrates the urgent need for effective protection.

I the Author intend to publish this review to provide technical insight for the personnel working in the autopsy activities during the COVID-19 pandemic. According to early studies, infection is spread by close and biblical contraption to a pathologic person, mostly through respiratory droplets produced by conversing, whooping, or blowing. Fever, cough, and difficulty breathing are all common symptoms of infection. The infection can lead to pneumonia, severe acute respiratory syndrome, multi-organ dysfunction or failure, and death in extreme instances. Because of the scarcity of scientific data and information of SARS-CoV-2 infection, it is thought prudent to treat COVID-19 patients in a systematic manner.

Proper management of the dead bodies is quite crucial as the nature of the infection and its pathogenesis was not well understood at the initial phase of the pandemic. The stakes were too high to take any risks and a proper protocol was much needed to minimize any mishaps or accidents that might lead to full fledged spread of the disease.

Key words: COVID-19, Pandemic, Dead bodies, Infection, Management, Public health

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INTRODUCTION

During every pandemic, proper handling of dead corpses is critical to preventing the spread of the bacteria that causes the sickness in the first place. COVID-19 is causing a rise in the amount of deaths in countries all over the world. As of this writing, there's no proof that a COVID-19 corpse is still pathogenic, according to science. COVID-19 positive bodies are treated in a variety of ways all across the world [1]. Governments have been warned by international agencies that the number of dead may

outnumber local authorities' ability to properly handle the bodies. Through mass fatality management and planning, social and economic image of the families of the deceased and living members must be respected. Incompetency in dealing with the departed corpses may have an anthropologic impact on those who did not die, inflicting sorrow among families and communities. Hence, administration of the deceased became a crucial step as the number of deaths increased with the rise in the spread of infection [2].

OBJECTIVE

The purpose of this review is to get an insight into various guidelines and literature on how to handle a COVID-19 positive corpse.

Mortality and COVID-19

The causal agent is the SARS-CoV-2 virus, which is an enveloped, positive-sense single-stranded RNA virus

belonging to the Coronaviridae family. The corona viruses that cause SARS (Severe Acute Respiratory Syndrome) and MERS (Middle East Respiratory Syndrome) are both classified as HG3 pathogens, on the other hand, majority of others are classified as HG2. The WHO has connected the current outbreak to the Huanan South China Seafood Marketplace.

The major mode of transmission is thought to be inhalation of big respiratory droplets or mucosal surface deposits, however other routes such as touch with a potentially infected body excrements and other transmission, have also been hypothesized. The incubation period is 5–6 days on average (range 0–14 days). On plastic and stainless steel, the virus's environmental stability ranges from 3 hours after aerosolization to 2–3 days. Based on available data, the mortality rate in China was estimated to be 5.6 percent (95 percent confidence interval 5.4–5.8), 15.2 percent (12.4–17.8) outside China, and as high as 22% in Hubei province.

Even after many countries proclaimed states of emergency to combat the virus's spread, the treatment of infected human remains, and funerals remained a point of anxiety in areas where the death toll is high on a daily basis. The Department of Health Welfare in India issued specific guidelines for dealing with diseased bodies. Additionally, embalming is prohibited [3].

Mass fatality management

According to unofficial estimates, the worldwide death toll might increase by a factor of ten. Local governments, states, and governments, as well as the private sector and faith-based community groups, must develop Management of mass casualties' strategies for managing and disposing of the bodies in such a situation.

The pandemic raises concerns about preparedness for mass fatalities, notably in terms of body care and cremation/burial. While no one knows for sure if human remains infected with corona virus are pathogenic, the chances are good. The WHO has issued a warning that the remains can transmit the disease to the population. Due to magnanimous dread, bodies of the dead were tortured in the hospital and yanked by that of the neck with tongs. Many communities in Italy and other countries were unable to lay their nearest and dearest due to a lack of space in cemeteries. Due to a scarcity of room at the city's cemeteries, Muslims and Christians are being forced to pay premium charges or relocate their loved ones to the outside of the city to be buried.

The proper and dignified management of deceased bodies, as well as their identification, storage, and disposal, is one of the brutal aspects of the disease out-break response. Despite several pandemics and fatalities in the past, many countries around the world lack a strategy, emergency infrastructure, plans of preparedness for processing and burning of the non-living people. The lack of preparation, as well as the lack of a strategy and a plan, has resulted in considerable delays, with dead people awaiting burial ceremonies.

Governments should take lessons due to the epidemic and develop a policy and approach for major losses for dealing with the bodies, with a focus on techniques for operations for body locating, collecting, and distinguishing, as well as funeral ceremonies, and final disposition are all part of the medico-legal investigation protocol. Sensitivities should be maintained and treated correctly, given the pandemic's Attributes of an international, non-linear and none, and particular faith. WHO has proposed standards for dealing with deceased bodies, however they only address the problem in part due to ethnic and religious complications. Governments should recognize and appreciate that a lack of capacity to cope with deceased corpses may have an impact on survivors' psychological, spiritual, and emotional well-being [4].

A methodical approach [5]

- ✓ Separated ward: Make sure that everybody who comes into contact with the body follows normal measures, such as hand hygiene is a must and proper PPE. Remove all lines, catheters, and other tubes from the body before transferring it, as well as any bodily fluids oozing from orifices, and moving and handling the body as little as possible.
- ✓ Before transferring the body, wrap it in a cloth and transfer it to the mortuary as quickly as feasible. Excessive body fluid leaking can be avoided by using leak-proof body bags. After the transfer, the isolation room should be thoroughly sterilized.
- ✓ Transferring the body to the mortuary: Cleanable, fluid-retentive temporary coffins should be used to transport bodies (e.g. fiberglass).
- ✓ After removing the corpse from storage, the specified sections in the storage facility is to be utilized and cleaned. If at all feasible, switch off the cold chain while not in use.
- ✓ While transferring and prepping the body for autopsy, morgue personnel must wear appropriate personal protective equipment.
- ✓ Autopsy: Autopsy should be avoided in a verified instance of Covid-19 death; nevertheless, It could come in handy in a medical-legal setting. Because live virus may remain in the lungs and other organs after aerosol-generating operations, further respiratory protection is required. The autopsy should take place in a room with sufficient ventilation.
- ✓ After an autopsy, the body must be handed over to the police and family, who must be instructed to maintain distance from the body, as well as not to crowd about in order to prevent disease transmission.
- ✓ At the funeral home, corpse handlers should wear proper protective gear. It should be burned as soon as feasible, handlers' hands washed and the environment sanitized afterward. To execute the last rites, the ash can be gathered.

- ✓ Cleaning and environmental management: In laboratory conditions, the virus may survive on surfaces for up to nine days. and can be detected for up to 72 hours. As a result, maintaining a clean environment is vital. Turn off all heating, ventilation, and air conditioning systems, and leave all windows open. Between processes, surfaces and tools in the environment should be disinfected.
- ✓ Last rite attendees and families can be educated and trained to bury persons at home under strict scrutiny. To the greatest extent possible, family members must limit their exposure. Handle the deceased's belongings with gloves i.e. the hand protectors and clean them with disinfectant and detergent.
- ✓ When handling and disposing of medical waste, biomedical waste management criteria must be observed.

Cleaning the morgue [6]

Various cleaning and disinfection techniques are shown in the studied literature. Disinfectants that have been utilized and their concentrations. The most common ingredients are bleach/chlorine (in various concentrations) and 70% alcohol. Disinfectants are used in various concentrations. The area where the deceased came into contact with other people needs to be disinfected with chlorine after being washed of observable organic materials or 70% ardent spirits. According to Germany, the autopsy room's air that is recirculated should be treated for 1 hour with Light irradiation and then filtered for 2 hours by a Fan Filter Unit (FFU). Human waste should not be flushed down the drain into untreated wastewater, but should be placed in 40 mg/l chlorine for 1, 5 hours. Then, until the untreated wastewater has a concentration of 10 mg/l chlorine, more chlorine should be washed down the crapper.

Ritual of resting place [7]

All the guidelines detail the use of personal protective equipment (PPE) by funeral directors. China and India prohibit embalming (also known as thanatopraxis). Only thanatopraxis is permitted in the Netherlands, although embalming is permitted in the United Kingdom and Australia when adequate supplementary protection equipment is used. In the Netherlands, family members of the deceased can have physical contact with them as long as they maintain proper hand hygiene. Other countries suggest avoiding or limiting physical contact with the deceased. It is recommended that COVID-19-positive bodies be cremated in China. The body must be buried at least 2 metres below ground level, according to German law.

Further discussion

There are many rules on how to handle deceased people who have died as a result of COVID-19 all over the world. The rules differ widely. On the one side, there is the attitude of " There's no problem; it's standard operating

procedure." Because the corpse is not breathing, there is no risk of infection, and families are free to say their goodbyes and do whatever they want with the departed. On the other side, some people have a 'code red' mentality. Because the risk of contamination is so great, all reasonable precautions should be followed, including touching the corpse as little as possible and decontaminating the surrounding area. It's unclear why one or the other attitude is picked in a guideline. The appears to have based his ideas on WHO standards, which only use the phrase "post-mortem" twice. Field visits provide the basis for the WHO guidelines. To a large extent, scientific evidence on post-mortem handling is lacking. Post-mortem contamination is not mentioned by the WHO as a critical knowledge gap. However, the WHO recommends that pathogenesis investigations be conducted utilizing biopsy/post-mortem tissues. There hasn't been a study like this published yet [8].

The usage of personal protective equipment (PPE) and additional safety precautions, particularly at the time of dissection, varies substantially according to the standards. There is a lot of variance in how disinfectants are used and how strong they are. Funeral services and communication with relatives are also highly encouraged.

COVID-19 found solely in the United Kingdom and is categorized as Hazardous Type 3, very much like SARS and MERS. COVID-19 (SARS-CoV2) may or may not have the a similar pathogenic qualities in a SARS-infected carcass (SARS-CoV1). In fact, there is currently insufficient scientific knowledge regarding COVID-19 to provide an informed recommendation [9].

Safeguarding the remains of COVID-19 victims in Sub-Saharan Africa [10]

In less than three months after the first cases were recorded on mainland China, the corona virus epidemic had spread to Africa. Many governments and donor organisations braced themselves for the unknown impact of the corona virus pandemic in under-resourced areas with high people living with HIV prevalence as corona virus readiness and quick strategies were quickly implemented in parts of Sub-Saharan Africa. Corona virus's potential negative impact in the above mentioned countries is unknown, even though it is expected to affect the people living with HIV in every possible way and can lead to their morbidity and death, necessitating governments to use pre-existing HIV care systems to drive corona responses while protecting people living with HIV and Human Immuno deficiency virus programme gains. PEPFAR quickly prepared instructions to quickly adjust Human Immuno deficiency virus programmes to sustain important HIV services while safeguarding beneficiaries of care and personnel from corona virus-related disruptions with the expectations of corona virus-related discrepancies.

The corona virus pandemic might jeopardise HIV care, particularly in countries where HIV incidence is high and health systems are weak and overburdened. Although

there is presently a lack of knowledge on how corona virus affects people living with HIV, it is critical that Municipal services and educational institutions study corona virus's impact on people living with HIV. When corona virus control measures are in action, the main principles of PEPFAR's Human Immuno deficiency virus programme adaptation advice priorities safeguarding Human Immuno deficiency reaction gains while avoiding home and professional visits and other forms of immediate contact. Clinical, laboratory, supply chain, community, and data reporting systems supported by PEPFAR can help mitigate COVID-19's impact in Sub-Saharan Africa [10-15].

The current extremely limited handling of the remains of persons who perished from COVID-19 offends African cultural dignity, produces tensions between families and the medical profession and government on the one hand, and is unjustified on the other. There is no scientific or legal basis for this. Arrangements for the secure transit of remains to the communities, as well as the restriction of any type of third-party manipulation of the corpse, can be made in strict conformity with barrier measures. These solutions allow for the reconciliation of security and dignity; their implementation would boost people's trust in the health system and aid in the fight against the pandemic.

CONCLUSION

Finally, the scientific basis on which the guidelines in this study are founded is relatively limited. Loads of scientific validation is needed to assure hygienic treatment of dead bodies in order to make a logical guess between a "no issue" & "code red" situation.

SARS-CoV-2 was provisionally classified as an HG3 pathogen (Hazard Group 3) by the Advisory Committee on Dangerous Pathogens (ACDP) in early 2020. HG3 pathogens have the potential to cause significant illnesses in people and pose a serious quagmire; the pathogens can frolic in the population, although appropriate preventative or therapeutic treatments are typically available.

When conventional universal procedures for infection prevention are used, the hazards for workers working in mortuary facilities are minor in most infections.

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