

Guideline on collection and transport of autopsy specimen of a suspected or confirmed case of COVID 19, for fungal studies

Background

Secondary fungal infections complicating COVID 19 infection have increasingly been reported worldwide [1]. The most frequently observed fungal infections of severe COVID 19 patients include aspergillosis, mucormycosis or invasive candidiasis [2,3,4,5]. However, the list of fungi that attributed to high mortality among COVID -19 patients is still evolving.

COVID-19 associated fungal infections have been observed in Sri Lanka recently. Investigation of fungal co-infection at autopsy is essential in order to identify relationship between death and fungal infection [6]. It also fills the gaps of the knowledge of epidemiology of invasive fungal infection among the above cohort. In addition, it will aid to prevent severe illness and death among future patients [6].

We have formulated this guideline with the aim of safe and effective collection and transport of autopsy specimen of a suspected or confirmed case of COVID 19, for fungal studies. Autopsy material for the fungal studies should be sent to the Department of Mycology, Medical Research Institute, Colombo.

Who is it for?

Health care professionals of forensic medicine / forensic pathology

Available tests

- i. Tissue/biopsy/ aspirate for direct smear and fungal culture
- ii. Serum for Aspergillus galactomannan test

Facilities and procedures of the autopsy

The autopsy of confirmed and suspected cases should be conducted at BSL3 or equivalent facilities. It is recommended to minimize direct contact with the bodies or postmortem samples, and prevent damage of PPEs.

Sample handling

Fungal cultures and direct smear

- Tissue/Biopsy specimen
Biopsies from the respiratory system, (proximal and distal trachea, pulmonary hilum, main and segmental bronchi, pulmonary parenchyma), and other organs if suspected, such as the heart, the liver, kidney, spleen, and intestines, could be sampled with a sterile scalpel.
- Aspirate from sinuses etc.
Aspirate from any site

Containers & transportation

- i. Put the specimen into a separate primary container with sterile normal saline, and seal it
 - a. A primary container should be, tightly sealable, sterile, screw capped container with sterile normal saline (Just to cover the specimen, do not put excess amount).
- ii. Disinfect the outer surface of the primary container with 70% alcohol, and label it with an identification detail
 - a. Label of the container should be contained below details
 1. Name
 2. BHT
 3. Age
 4. Ward
 5. Hospital
 6. Type and the site of the specimen
 7. Date o collection
- iii. Transport the autopsy-derived samples for mycological studies as following,
 - Wrap the primary container with an absorbent material
 - Put the primary container into the secondary container, and seal it,

- Put the secondary container into the tertiary container and seal it, and then label it with a tag.

The personnel who pack or open the containers should wear the PPEs equivalent to that used in the autopsy room or laboratory.

Specimens should be transported to the reference laboratory (Department of Mycology, Medical Research Institute, Colombo) as soon as possible (at room temperature). If delay is UNAVOIDABLE specimens could be kept at room temperature for 1 day.

References

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