THE MALAYSIAN THORACIC SOCIETY

The Malaysian Thoracic Society Recommendations On Endoscopy Services During COVID-19 Pandemic

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Introduction:

- Endoscopy procedures performed by respiratory physicians may include flexible/rigid bronchoscopy, endobronchial ultrasound (EBUS) and pleuroscopy.
- Bronchoscopy, and to a lesser-extent pleuroscopy, are aerosol-generating procedures.
- Hence, they are associated with a high risk of spreading infections that are transmissible via droplet nuclei or aerosols
- During a pandemic, e.g. COVID-19, extra precaution should be taken when the procedure is considered.
- The urgency of the endoscopy may be a prime consideration in our decision whether to proceed with the procedure.

Levels of urgency:

1. *Urgent:* Examples include massive haemoptysis, severe respiratory distress as a result of acute central airway obstruction.
2. *Semi-urgent:* Examples include moderate haemoptysis, lung tumour, subacute/acute progressing interstitial lung disease (ILD).
3. *Non-Urgent:* All other indications.

   Remark: When possible, consider an rt-PCR COVID-19 test prior to the procedure, after taking into consideration the turnaround time of the test result and the patient's level of urgency.

Preparation before bronchoscopy and pleuroscopy:

1. All patients need to have their temperature checked (if not already checked in the ward)
2. All patients need to be questioned regarding the presence of any respiratory symptoms, fever or any other symptoms which may suggest an infection

3. All patients need to be asked the history of potential contact with anyone with confirmed or suspected COVID-19
4. All patients need to be asked about travel history over the past 4 weeks.

Personal Protective Equipment (PPE) during bronchoscopy:

1. All patients are required to wear a surgical mask (3-ply mask) when coming to the endoscopy suite.
2. Patient to wear a surgical mask while undergoing pleuroscopy
3. Limit the number of bronchoscopist (max 2, preferably 1).
4. Limit the number of nurses/assistants (max 2 persons).
5. Wear an **N95 mask**, **sleeved gown**, **gloves** and a **face shield or goggles** during bronchoscopy - for both bronchoscopist and assistant.
6. **Powered air-purifying respirator** (PAPR) can be used if available and personnel concerned must have received prior supervised training.
7. All bronchoscopy should be preferably be performed in a **negative-pressure room**.
8. For COVID-19 patients, **disposable footwear** should also be used and the room needs to be disinfected after the procedure.

Flexible Bronchoscopy/EBUS:

1. Delay **ALL** non-urgent cases until the COVID-19 crisis is over.
2. For Semi-Urgent cases: may perform if COVID-19 is very unlikely.
3. **AVOID** bronchoscopy on any patient with COVID-19 or any patient with fever and/or respiratory infection.

Rigid bronchoscopy:

1. Postpone if possible.
2. Use endotracheal tube (ETT) or laryngeal mask airway (LMA) in closed ventilation instead of rigid tube bronchoscope if technically feasible.

3. If rigid tube bronchoscopy has to be used; ventilation should be provided by a closed ventilation system instead of jet ventilation.

Pleuroscopy:

1. Suspected malignancy:
   - May perform as usual as long as COVID-19 is deemed unlikely or being ruled out with the PCR test.
2. Pleural effusion
   - Instead of pleuroscopy, alternative procedures, e.g. pleurocentesis / thoracocentesis +/- pigtail/chest tube insertion may be considered.
   - If pleural tuberculosis (TB) is deemed likely, treat empirically based on pleurocentesis result and clinical criteria for 2 weeks and follow up to evaluate response.
3. Parapneumonic effusion:
   - Pleurocentesis/ thoracocentesis ± pigtail/chest tube insertion.
   - Avoid pleuroscopy as much as possible.

Other remarks:

1. Bronchoscopist should retake COVID-19 exposure history in the waiting area before the procedure.
2. Nurses to keep records of all postponed cases and their level of urgency. We may need to call them early for the procedure if the COVID-19 situation improves.
3. Follow the strict procedure of scope cleaning - use high-level disinfection.
4. **NO** bronchoscopic procedures are to be performed on COVID-19 patients unless they are deemed to be extremely necessary by the Head of Department/Division/Unit.
5. If unavoidable, bronchoscopy should only be performed in rooms with negative pressure. All personnel in the room **MUST** wear PAPR. The room used needs to be properly disinfected and left vacant for a few hours after the procedure.