

BRONCHIAL OCCLUSION WITH ENDOBRONCHIAL WATANABE SPIGOT ASSISTED BY BIDIRECTIONAL GUIDING DEVICE UNDER LARYNGEAL MASK AIRWAY VENTILATION

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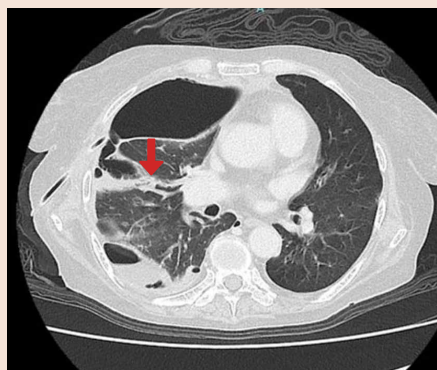
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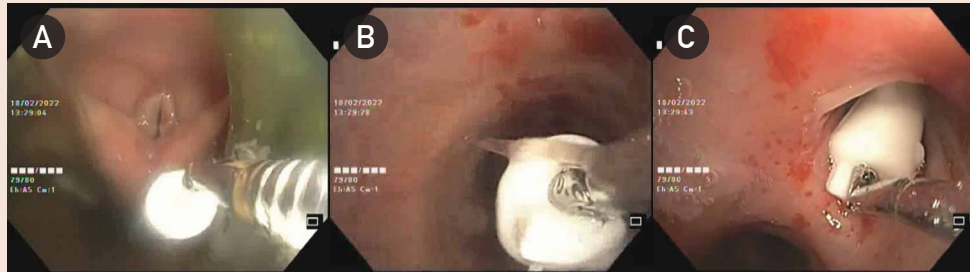
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Background Bronchial occlusion with Endobronchial Watanabe Spigot (EWS) is a useful technique in the management of persistent air leak (PAL). However, its insertion usually requires endotracheal intubation which may be challenging in patient with poor respiratory reserve. In this report, we describe a case of successful EWS placement assisted by bidirectional guiding device (CC-6DR-1, Olympus, Japan) with the usage of supraglottic airway (laryngeal mask airway, LMA).



Case Presentation 64 years old lady with refractory and relapsed multiple myeloma on thalidomide and dexamethasone presented to us with right necrotizing pneumonia and pyopneumothorax. Frank pus was drained after intercoastal chest tube (ICT) insertion. However, despite two weeks of adequate intravenous antimicrobial therapy, right lung remains non-expandable with persistent air leak (Cerfolio Grade 4). CT thorax confirmed right lung necrotizing pneumonia and pyopneumothorax with suspicious bronchopleural fistula (arrow). Bronchial occlusion was decided as patient was deemed high surgical and anesthetic risk in view of underlying advanced life-limiting co-morbidities.

Procedure Description Under LMA ventilation (with i.v. midazolam and fentanyl), balloon occlusion test was performed sequentially on segmental airway of right endobronchial tree. Air leak reduced significantly to Cerfolio Grade 1 upon occlusion of anterior segment of right upper lobe (RB3).

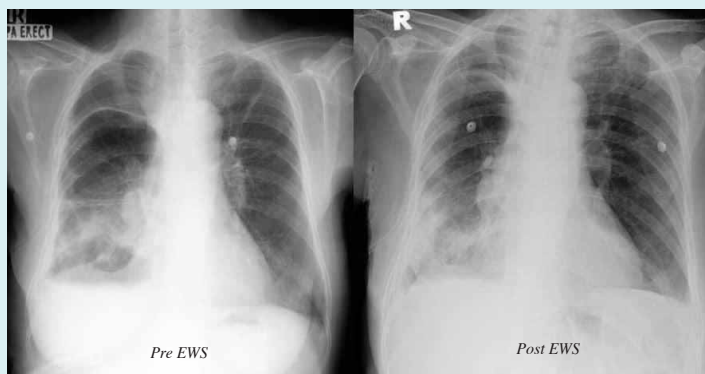
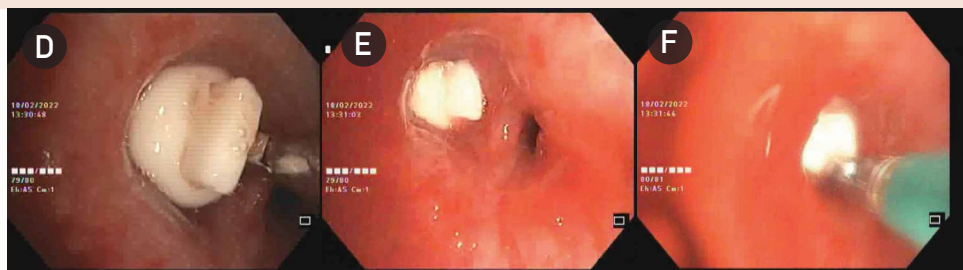


A Bidirectional guiding device was inserted through the bronchoscope's working channel with a 6mm EWS plugged at its tip. The bronchoscope-bidirectional guiding device-EWS was then inserted en-bloc through a size 4.5 LMA

B C Through the LMA and cautiously through the vocal cord, the EWS was manipulated (through rotational and flexion-extension) through the trachea, right main bronchi and into the right upper lobe bronchus.

D E The EWS was then snugged tightly into the target sub-segment of RB3. It was then dis-impacted from the bidirectional guiding device by a gentle push from the bronchoscope while retracting the bidirectional guiding device slowly.

F The fitness and stability of EWS was further check with flexible forcep to ensure minimal movement with cough and forced expiration.



Progress Post procedure, air leak ceased completely and lung expansion improved. ICT was off the following day and patient discharged home with prolonged course of oral antimicrobial. Patient remained well but succumbed to her underlying hematological malignancy two months later peacefully.

Conclusion Bronchial occlusion with EWS is a valid option for high surgical risk patient with PAL. Further studies focusing on less invasive insertion technique is highly anticipated in the future.

