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Department of respiratory medicine, HIMS achieves 10,000 bronchoscopies: A landmark in pulmonary diagnostics

Rakhee Khanduri

Department of Respiratory Medicine, Himalayan Institute of Medical Sciences, Jolly Grant, Dehradun, Uttarakhand, India.

Abstract

The Department of Respiratory Medicine at the Himalayan Institute of Medical Sciences, Jolly Grant, has successfully performed 10,000 bronchoscopic procedures, marking a significant milestone in patient care, teaching, and research.

Corresponding Author: rakhee.sodhi@gmail.com

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Clinical utility and diagnostic yield

Flexible fibreoptic bronchoscopy has been instrumental in diagnosing a wide range of pulmonary conditions. The most common indications included evaluation of suspected pulmonary tuberculosis, lung cancer, non-resolving pneumonias, haemoptysis, interstitial lung disease, and airway obstruction (Prakash, 1991; Du Rand et al. 2013; Rivera et al. 2013).

A substantial diagnostic yield was observed in patients with endobronchial growths, peripheral lesions, and smear-negative tuberculosis, highlighting the value of bronchoscopy in regions with a high burden of both infectious and non-communicable respiratory diseases (Sehgal et al. 2014). A significant proportion of procedures also assisted in managing foreign body aspirations, airway stenosis, and opportunistic infections among immunocompromised patients.

With the newest addition of endobronchial ultrasound (EBUS) into the armory, the diagnostic yield of transbronchial needle aspiration has also improved significantly, leading to early diagnosis, staging, and treatment of various granulomatous diseases and malignancy (Fielding et al. 2015; Facciolongo et al. 2009; Dhooria et al. 2016).

Complications and safety profile

Among 10,000 procedures, the overall complication rate remained low and manageable. Minor events such as bleeding, transient hypoxemia, and bronchospasm were the most frequently encountered, while serious complications like pneumothorax or massive haemorrhage were rare (Facciolongo et al. 2016). This reflects adherence to standard operating protocols and the expertise of trained faculty.

Challenges encountered

The department faced several challenges during this journey:

1. Late-stage presentations of lung malignancy, limiting early therapeutic intervention.
2. Reluctance towards invasive testing due to patient hesitancy and financial constraints.
3. The COVID-19 pandemic, during which bronchoscopy required stringent infection-control measures due to aerosol generation risk (Wahidi et al. 2020).

Training and research contributions

The bronchoscopy unit has simultaneously served as a teaching platform for postgraduate residents and a source of valuable data for clinical research. Numerous academic publications and conference presentations have emerged from these experiences, contributing to the body of knowledge in respiratory medicine.

Future directions

The department is expanding into advanced modalities such as cryobiopsy and interventional bronchoscopy including rigid bronchoscope, aiming to further enhance diagnostic precision and therapeutic interventions (Hetzel et al. 2020; Ernst et al. 2004).

This milestone reinforces the department's commitment to delivering excellence in pulmonary healthcare, education, and research in the Himalayan region.

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