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Inside this Issue

Editorial
World Lung Day 2025
Technology Corner
IP (Interventional Pulmonology) Corner
Image Contest
Thoracic Surgery Updates
CHABCON News
The Journey of CHAB
Case Reports
Recognizing Excellence
What`s New in Respiratory Medicine?
Research
Link

The Chest and Heart Association of Bangladesh

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Healthy Lungs, Healthy Life

On this World Lung Day 2025, we are proud to present the latest issue of The Chest and Heart Association Bangladesh News Bulletin. As respiratory health takes its rightful place at the forefront of global public health conversations—including the FIRS-led campaign "Healthy Lungs, Healthy Life" urging awareness, prevention, and equitable care—this edition brings together a rich mix of content: challenging and instructive case reports, updates in interventional pulmonology, insightful radiology lessons, and the honorees of prestigious awards conferred at APSR 2025. Together, they reflect our shared mission: advancing knowledge, improving care, and honoring the outstanding contributions of our colleagues in lung health in Bangladesh and beyond.

Editorial

Dr. Zahirul Islam Shakil, President, CHAB
Dr. Golam Sarwar Liaquat Hossain Bhuiyan, Secretary General, CHAB

Novel drugs for Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) is a progressive, inflammatory respiratory disorder characterized by persistent airflow obstruction. The management of COPD focuses on controlling symptoms, preventing exacerbations, and slowing progression of disease through pharmacological and non-pharmacological interventions. Inhaled broncho-dilators, long-acting beta2-agonists (LABAs), long-acting muscarinic antagonists (LAMAs), alone and in different types of fixed-dose combinations remain the cornerstone of treatment of COPD. In certain cases, inhaled corticosteroids (ICS) are added to the regimen to reduce airway inflammation and exacerbation frequency.

Even though these established therapies significantly improve the disease burden, there exist definite unmet needs. The heterogeneity in patient response, persistence of exacerbations, different degrees of inflammation- drive the need for novel classes of drugs.

Several new drugs have been approved and included in COPD management in recent guidelines. These agents are designed to control symptoms and reduce exacerbations, and also to target inflammation, oxidative stress, and other underlying disease mechanisms more effectively.

Phosphodiesterases (PDEs) are enzymes that control many bodily functions by regulating the amount of cyclic nucleotide signaling molecules inside cells. The levels of cyclic adenosine monophosphate (cAMP) and cyclic guanosine monophosphate in airway smooth muscles are controlled by PDE3. Inhibiting PDE3 causes airway smooth muscle to relax1. PDE4 controls cAMP levels and plays an important role in inflammatory cell activation. Therefore, PDE4 inhibition has anti-inflammatory effects2. These data indicate that the simultaneous inhibition of PDE3 and PDE4 should have combined benefits in reducing inflammation and dilatation of the airways.

Ensifentrine is a novel medication in inhaled form that inhibits PDE3 and PDE4 simultaneously. This drug should effectively dilate the airways and reduces inflammation in COPD3. Ensifentrine which has been approved by FDA offers a potential new approach in the management of COPD.

Roflumilast is an orally administered PDE4 inhibitor with anti-inflammatory activity that reduces exacerbation rates in patients with COPD with a history of exacerbations plus chronic bronchitis. However, roflumilast is not widely used because systemic exposure frequently causing intolerable adverse effects, notably weight loss and gastrointestinal disturbance4,5.

In september 2024, FDA approved dupilumab as a therapeutic option for patients with refractory eosinophilic COPD who are inadequately controlled on standard therapies. This expanded indication was supported by the phase III randomized controlled trials, BOREAS and NOTUS, which demonstrated dupilumab's efficacy in reducing exacerbations and further highlighted its role in improvements of lung function and quality of life6,7. Dupilumab is a human monoclonal antibody which inhibits IL-4 and IL-13 activity, reducing type 2 inflammation.A subgroup of patients with COPD is characterized by evidence of local and systemic type 2 inflammation.

Researchers have identified a promising alternative to steroid therapy for COPD by repurposing pirfenidone, a drug currently used to treat lung fibrosis. A study discovered that pirfenidone effectively reduced airway inflammation in COPD without suppressing immune response. Further researches are needed in this field.

New, ongoing drug trials for COPD are Itepekimab, a biologic for moderate to severe COPD currently in Phase 3 studies, oral myeloperoxidase inhibitor mitiperstat in the CRESCENDO trial and the inhaled PDE4 inhibitor tanimilast.

Approximately half of patients with COPD continue to have exacerbations despite maximal standard therapy causing millions of death. The goals of management of COPD are relief of symptoms, prevention of exacerbations along with improvement of lung functions and quality of life. The current COPD disease status is

far away from these goals. Novel modalities of treatment are the only promising hope for a better future.

References

1. Banner KH, Press NJ. Dual PDE3/4 inhibitors as therapeutic agents for chronic obstructive pulmonary disease. Br J Pharmacol. 2009; 157: 892–906.
2. Singh D, Emirova A, Francisco C, et al. Efficacy and safety of CHF6001, a novel inhaled PDE4 inhibitor in COPD: the PIONEER study. BMC Respir Res. 2020; 21: 246.
3. Franciosi LG, Diamant Z, Banner KH, et al. Efficacy and safety of RPL554, a dual PDE3 and PDE4 inhibitor, in healthy volunteers and in patients with asthma or chronic obstructive pulmonary disease: findings from four clinical trials. Lancet Respir Med. 2013; 1: 714–727.
4. Singh D, Lea S, Mathioudakis AG. Inhaled phosphodiesterase inhibitors for the treatment of chronic obstructive pulmonary disease. Drugs. 2021; 81: 1821–1830.
5. Calverley PM, Rabe KF, Goehring UM, Kristiansen S, Fabbri LM, Martinez FJ, M2-124 and M2-125 study groups.Roflumilast in symptomatic chronic obstructive pulmonary disease: two randomised clinical trials. Lancet. 2009;374: 685–694.
6. Bhatt SP, Rabe KF, Hanania NA, Vogelmeier CF, Cole J, Bafadhel M, et al. Dupilumab for COPD with Type 2 Inflammation Indicated by Eosinophil Counts. N Engl J Med. 2023; 389: 205–214.
7. Bhatt SP, Rabe KF, Hanania NA, Vogelmeier CF, Bafadhel M, Christenson SA, et al. Dupilumab for COPD with Blood Eosinophil Evidence of Type 2 Inflammation. N Engl J Med. 2024; 390: 2274–2283.

World Lung Day 2025

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Every year on 25 September, World Lung Day reminds us that the ability to breathe is the most basic human right. In Bangladesh, this reminder is painfully visible. At the outdoor department of NIDCH, pulmonologists witness more than 500 patients every single day, referred from villages and towns across the country. They arrive exhausted after long journeys—some clutching X-rays, some struggling for breath, many with hope written in their eyes.

Their stories reflect our national struggle. Tuberculosis, though curable, continues to affect thousands, leaving behind lasting scars. COPD and asthma silently burden families, making work and daily life a constant challenge. Air pollution from traffic fumes, brick kilns, and indoor smoke, is now an unavoidable threat, worsening symptoms in both young and old. Many patients suffer from bronchiectasis, a painful reminder of infections left untreated, where every cough is heavy with years of damage.

These are not just cases—they are rickshaw-pullers who cannot pedal anymore, mothers who cannot cook without coughing, and children who cannot play like others. Behind each statistic lies a human face, a family, a struggle.

On this World Lung Day 2025, we must act with urgency. The Chest and Heart Association of Bangladesh (CHAB), with its long legacy on lung care, can play a stronger and louder role— raising its voice louder, shaping policies, and leading the fight so that no Bangladeshi is left gasping for breath.

“Every breath matters. On World Lung Day 2025, let us unite against tuberculosis, COPD, asthma, pollution, and bronchiectasis.”

Virtual Bronchoscopy: A New Horizon in Airway Imaging

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Virtual bronchoscopy (VB) is a non-invasive imaging technique that uses computed tomography (CT) or magnetic resonance imaging (MRI) scans to create a detailed, three-dimensional (3D) digital reconstruction of the tracheobronchial tree.

The procedure: 1. A standard, high-resolution CT scan of the chest is performed, often with intravenous contrast. In children, a low-dose CT scan can be used to minimize radiation exposure. 2. Specialized software processes the CT scan's digital data, distinguishing the air-filled airways from surrounding tissues. 3. The software reconstructs the data into a 3D model, allowing a radiologist or pulmonologist to navigate and manipulate the virtual airways on a workstation. 4. No special patient preparation is typically required, other than avoiding food or drink for a few hours prior to the scan.

Clinical applications: Diagnosing airway disease: VB is used to assess the anatomy of the trachea and bronchi and to identify abnormalities such as tumors, strictures (narrowing), or foreign bodies. • Evaluating obstructive lesions: It is particularly useful for assessing the location and extent of airway obstructions. VB can also visualize the airways beyond a severe obstruction, which is often impossible with a traditional bronchoscope. • Assessing external compression: VB can show how enlarged lymph nodes or other masses outside the airways are compressing the bronchial walls, providing information that a traditional bronchoscope, which can only see the interior of the airway, cannot. • Preoperative planning: It helps surgeons and interventional pulmonologists plan procedures such as the placement of stents. • Evaluating anatomical variants: VB is a helpful tool for studying congenital or acquired malformations of the airways. • Pediatric cases: It can be used as a less invasive alternative to traditional bronchoscopy in children. • Educational tool: The "flight simulator" aspect of VB can help train pulmonologists to understand and navigate the anatomy of the tracheobronchial tree. Advantages of VB: 1. Non-invasive. 2. Can visualize airways distal to a severe blockage. 3. Can visualize masses or enlarged lymph nodes compressing the airways from the outside. 4. Safer and more comfortable for patients who cannot tolerate conventional bronchoscopy. 5. Can significantly reduce the procedure time for conventional bronchoscopies when used for pre-planning. Disadvantage of VB: Virtual Bronchoscopy (VB) 1. Cannot perform a biopsy or therapeutic intervention. 2. Cannot detect subtle mucosal lesions, inflammation, or vascularity. 3. Involves exposure to a low dose of ionizing radiation from the CT scan.

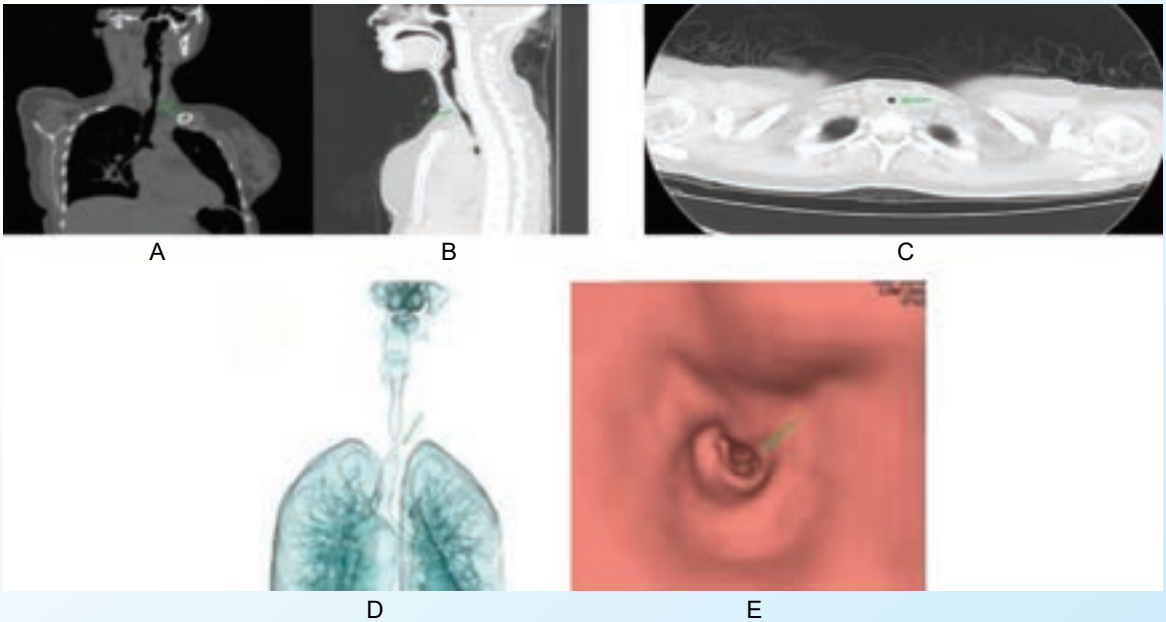

Figure: *(A) CT image, curved planer reformat, (B) CT image, sagittal minimum intensity, (C) Coronal minimum intensity of a 20-year-old female patient showing laryngotracheal stenosis (arrow). In this patient the stenotic segment measured 29mm in length and 3mm in diameter at narrowest point. (D) 3D external volume rendering, (E) Virtual bronchoscopy at the level of stenosis.*

IP (Interventional Pulmonology) Corner

The Evolving Role of Transbronchial Needle Aspiration (TBNA) in Modern Pulmonology

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Transbronchial Needle Aspiration (TBNA) has been a cornerstone of interventional pulmonology for decades, revolutionizing the diagnosis and staging of diseases of the chest. First introduced in 1949 and later adapted for flexible bronchoscopy in the late 1970s, TBNA provides a minimally invasive procedure in which sample tissue is obtained from beyond the central airway walls, primarily from mediastinal and hilar lymph nodes.

Initially performed as conventional TBNA (c-TBNA), guided by anatomical knowledge and pre-procedure imaging, it has now advanced to Endobronchial Ultrasound-Guided TBNA (EBUS-TBNA), which offers real-time imaging, precise guidance and higher diagnostic accuracy.

TBNA is especially important in evaluating unexplained lymphadenopathy and differentiating conditions with overlapping clinical or radiological features. It is central in staging lung cancer, determining treatment pathways, and distinguishing malignant causes such as lymphoma from benign ones like sarcoidosis or infection (e.g., tuberculosis). By establishing a tissue diagnosis, TBNA avoids unnecessary surgeries, reduces costs, and allows for early targeted therapy.

In low-resource settings, c-TBNA remains valuable, providing affordable and accessible diagnostics where EBUS is unavailable. Thus, TBNA continues to play a pivotal role in modern respiratory medicine by bridging advanced technology and practical accessibility.

Case Report: Role of Conventional TBNA (c-TBNA) in Diagnosing Sarcoidosis in a Low-Resource Setting

A 38-year-old female presented with a history of persistent dry cough for three years. She had previously consulted multiple physicians without symptomatic improvement. On evaluation at NIDCH OPD, clinical examination and initial investigations including chest X-ray, complete blood count, and Mantoux test were performed. Contrast-enhanced CT of the chest revealed mediastinal lymphadenopathy, with Mantoux 3 mm and elevated serum ACE (71 U/L).

For definitive diagnosis, flexible bronchoscopy with conventional transbronchial needle aspiration (c-TBNA) was undertaken. Bronchoalveolar lavage (BAL) fluid was also sent for GeneXpert and CD4:CD8 ratio. Cytopathological report and supportive findings confirmed sarcoidosis. Corticosteroid therapy was initiated, and at two-month follow-up, the patient showed complete clinical recovery and significant radiological improvement. Now the patient felt better and was no longer afraid of cancer.

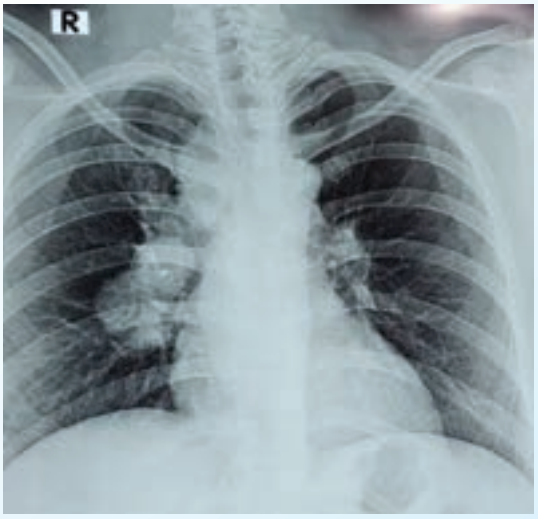


Figure 1: *Chest X-ray showing mediastinal adenopathy.*

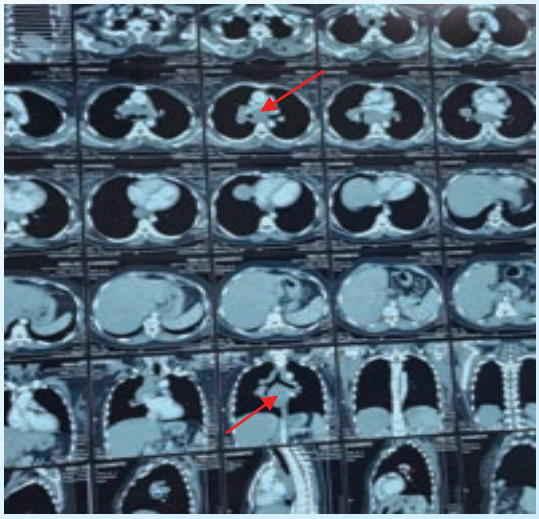


Figure 2: *CECT chest demonstrating mediastinal lymphadenopathy*

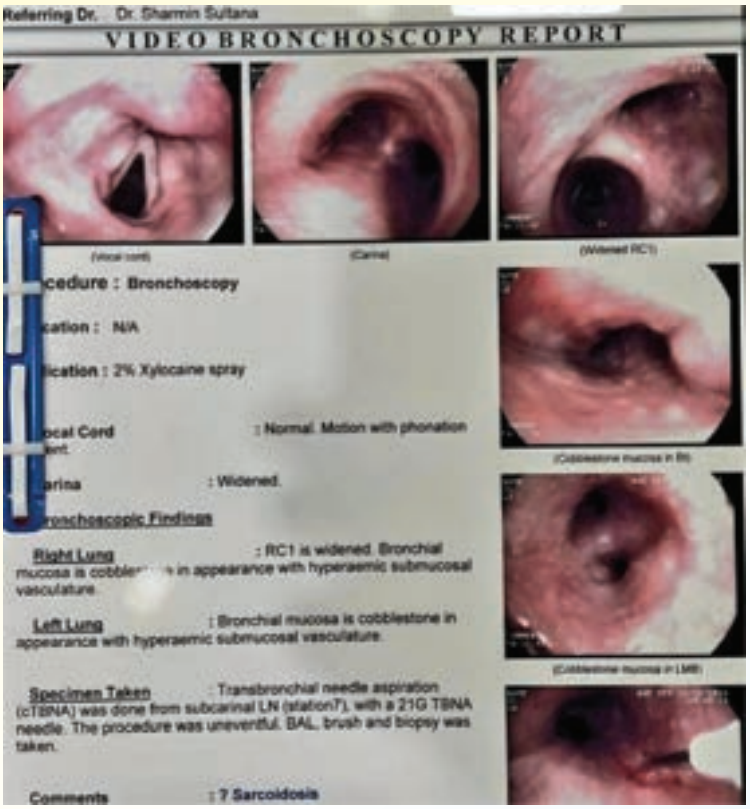
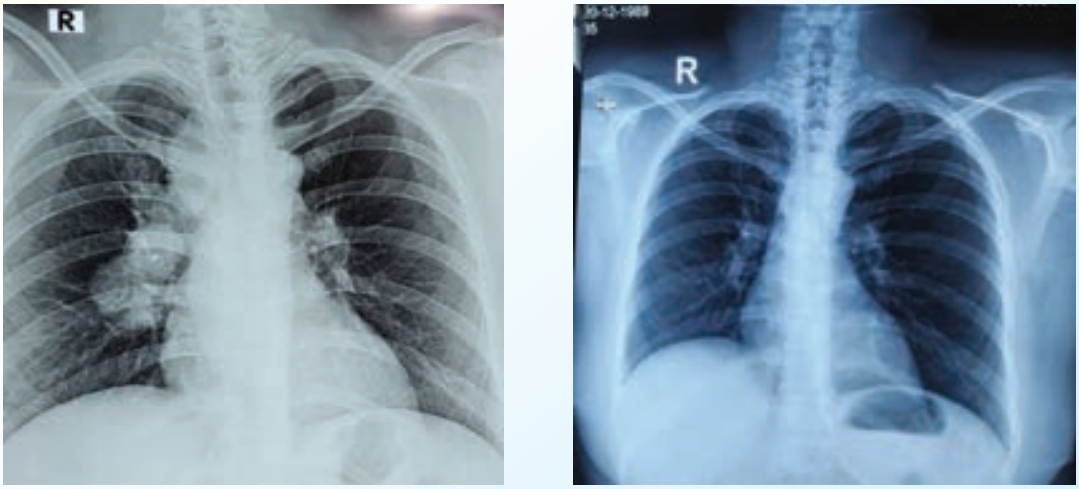


Figure 3: *Bronchoscopic image during c-TBNA procedure showing cobblestone appearance of bronchial mucosa.*



Before treatment *After treatment*

Figure 4: *Follow-up chest X-ray showing complete radiological improvement after treatment.*

This case highlights the effectiveness of c-TBNA as a minimally invasive, cost-effective diagnostic tool in undiagnosed mediastinal lymphadenopathy, especially valuable in low-resource settings where advanced EBUS facilities may not be available. Early diagnosis facilitates timely treatment and improved outcomes.

Reference:

1. Murray & Nadel's Textbook of Respiratory Medicine, 2-Volume Set, 8th Edition
2. History of Bronchoscopy - The evolution of Interventional Pulmonology/Chapter/First Online:30 April 2023/pp 733-745
3. Davidson`s Principles and Practice of Medicine 24th Edition
4. Atul Mehta, Prasoon Jain, Editros. Interventional Bronchoscopy, A Clinical Guide

Image Contest

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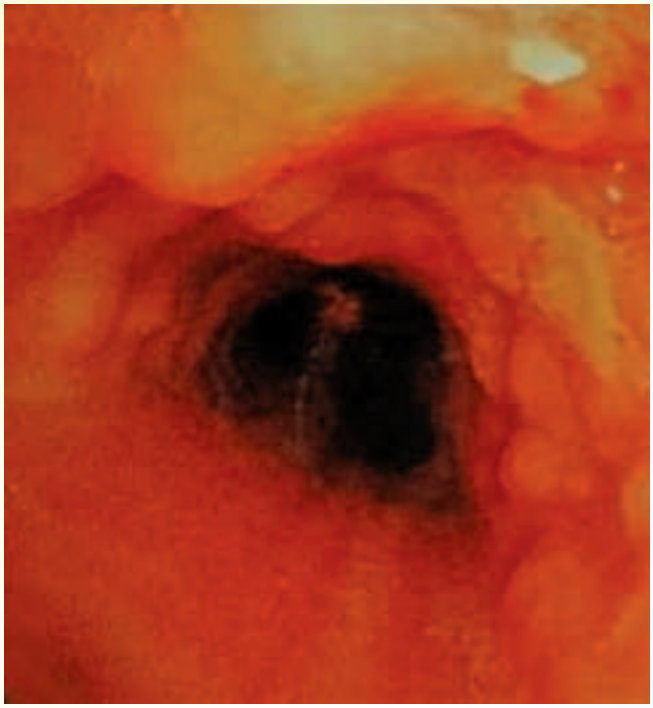

A 43-year-old female presenting with progressive shortness of breath (SOB).Flexible bronchoscopy performed for evaluation of airway pathology. Bronchoscopic visualization reveals multiple sessile, cartilaginous nodules projecting into the tracheal lumen, predominantly involving the anterior and lateral walls. The posterior membranous wall is spared, consistent with the classic distribution of Tracheobronchopathia Osteochondroplastica (TO), a rare benign condition marked by submucosal ossification and cartilage formation within the tracheobronchial tree. The sparing of the posterior wall and nodular pattern are diagnostic hallmarks.TO may be asymptomatic or present with chronic cough, dyspnea, wheezing, or recurrent respiratory infections. In this case, the patient's shortness of breath may be attributable to mechanical airway obstruction from intraluminal nodules.The medical treatment are nonspecific and the outcome is good.

Thoracic Surgery Updates

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VATS is the Game Changer in Lung Cancer Surgery

Lung cancer remains one of the leading causes of cancer-related deaths globally and Bangladesh as well, with surgical resection being a cornerstone in the management of early-stage disease. Traditionally, open thoracotomy was considered the standard approach for lung cancer surgery. However, with advancements in minimally invasive techniques, Video-Assisted Thoracoscopic Surgery (VATS) has emerged as a revolutionary game changer, transforming the surgical landscape for both patients and surgeons.

Video-Assisted Thoracoscopic Surgery is a minimally invasive technique that allows surgeons to access the thoracic cavity using small incisions, a high-definition camera, and specialized instruments. Unlike conventional thoracotomy, which requires a large incision and rib spreading, VATS minimizes tissue trauma, offering an alternative that combines safety, efficacy, and faster recovery.

Why is VATS a Game Changer?

1. Reduced Surgical Trauma

   VATS eliminates the need for rib spreading, leading to significantly less postoperative pain, reduced risk of complications, and faster mobilization.

2. Enhanced Recovery and Shorter Hospital Stay

   Patients undergoing VATS experience quicker postoperative recovery, shorter hospital stays, and

faster return to normal activities compared to open surgery.

3. Comparable Oncological Outcomes

   Multiple studies have demonstrated that VATS lobectomy offers equivalent oncological outcomes to open thoracotomy in terms of lymph node dissection, margin status, and long-term survival rates.

4. Better Tolerance for High-Risk Patients

   Elderly patients or those with comorbidities tolerate VATS better due to its minimally invasive nature, expanding the pool of candidates eligible for surgical resection.

5. Improved Postoperative Quality of Life

   VATS leads to less postoperative pain, reduced need for opioids, lower incidence of postoperative complications such as pneumonia, and improved pulmonary function preservation.

VATS has truly been a game changer in lung cancer surgery by reducing the morbidity associated with traditional thoracotomy while maintaining oncological efficacy. Its widespread adoption marks a paradigm shift towards patient-centered care, where less invasive approaches translate into better outcomes, quicker recovery, and improved quality of life. As technology continues to evolve, VATS is likely to remain at the forefront of thoracic oncology for years to come. To get the highest benefit from VATS early diagnosis is the key. Though most of the cases in Bangladesh present in late stage, screening program could allow the benefit of minimally invasive surgery even in high risk patients.

CHABCON NEWS

Healing with Heart Award

Strengthening programs that encourage not only scientific excellence but also empathy and compassion in patient care. With this spirit, we are proud to introduce, for the first time, the “Healing with Heart Award” — a recognition of humane and compassionate medical service.

As we reflect on these accomplishments, CHAB reaffirms its role as a professional community that celebrates the success of its members and works collectively for better respiratory health in Bangladesh.

Academic collaboration between NTP and PeerLINC Knowledge Hub

MAKATI CITY, PHILIPPINES—PeerLINC Knowledge Hub recently welcomed a delegation from Bangladesh’s National Tuberculosis Program (NTP) to a week-long capacity-building program aimed at accelerating the country’s transition to shorter, safer treatment regimens for drug-resistant tuberculosis (DR-TB). The Secretary General of CHAB, Dr. Golam Sarwar Liaquat Hossain Bhuiyan, was a part of the Bangladesh NTP managers.Held from 22 to 25 July 2025 at the Somerset Millennium, Makati, the training combined interactive lectures, workshops, and field visits across Metro Manila to offer a comprehensive view of implementing the WHO-recommended six-month BPaLM/BPaL regimens.

This training emphasized PeerLINC’s peer-to-peer model of knowledge exchange,which links country experiences, national policies, and frontline program realities in pursuit of a common goal to end tuberculosis globally.

Bangladesh NTP managers participated in intensive workshops that addressed the clinical, laboratory, programmatic, and social dimensions which is critical for the successful roll-out of the new regimen. The sessions also emphasized the integration of gender equality, disability, and social inclusion (GEDSI) into treatment planning and implementation.

Figure : *Dr. Golam Sarwar Bhuiyan exchanges insights with Dr. Jed Solo Culata of the Bangkal Health Center in Makati. The field visit allowed participants to observe patient management workflows and discuss practical challenges in DR-TB treatment delivery.*

Throughout the week, the Bangladesh team drafted a country action plan to guide the phased introduction of BPaLM/BPaL across its DR-TB program. Discussions included supply chain planning, diagnostic protocols, and mechanisms for inclusive decision-making. The training closed with a post-evaluation session, participant feedback, and the awarding of certificates.

Bangladesh's leadership in TB control is clear, and this program has only strengthened it. What we witnessed over the course of the week was not just knowledge exchange, but co-creation of practical solutions that are grounded in shared values of equity and innovation. This is what Peer LINC was designed for: to enable countries to lead boldly, with evidence and with heart," said Peer LINC Head, Dr. Eden Mendoza-Hisey.

CHAB's Initiative in Developing Tuberculosis Guidelines

The Chest and Heart Association of Bangladesh (CHAB) has taken an important step toward strengthening the management of tuberculosis, which remains a major public health challenge in Bangladesh. Recognizing the need for a structured and evidence-based approach, CHAB has initiated the development of a comprehensive guideline on both pulmonary and extra pulmonary tuberculosis.

This initiative complements the existing National TB Guideline, which already provides direction for tuberculosis control across the country. While the national guideline serves as the cornerstone for public health management of TB, CHAB's effort is more academically oriented, designed to enrich postgraduate medical education and clinical training.

The new guideline is being prepared in collaboration with experts from various specialties, including pulmonology, radiology, pathology, microbiology, ENT, Hepatology, Orthopaedics, Dermatology, Ophthalmology and many more. By involving multiple disciplines, CHAB ensures that the guideline addresses the diverse clinical presentations of TB, covers both diagnostic and therapeutic aspects and reflects the realities of healthcare in Bangladesh.

Importantly, the guideline is being developed based on information gathered from various standard textbooks and internationally recognized journals. This ensures that the content remains authentic, updated, and evidence-based. For postgraduate medical students, the guideline will serve as a valuable academic resource—helping them to better understand complex aspects of pulmonary and extra pulmonary TB and supporting their academic progress and research. This will also be expected to serve as a practical reference for physicians and healthcare workers across the country.

Spreading Knowledge of Pulmonology

The Chest and Heart Association of Bangladesh (CHAB) has been playing an important role in promoting awareness and advancing education in the field of pulmonology. Recognizing that specialized knowledge should not remain confined only to the capital, CHAB has taken the initiative to organize academic programs, seminars, and workshops not only in NIDCH but also in different medical colleges even outside Dhaka.

By bringing experts directly to local institutions, CHAB is not only improving the academic strength of pulmonology as a subject but also creating a stronger foundation for clinical practice. This initiative is bridging the gap between urban and regional medical education, preparing the next generation of physicians to better serve patients suffering from lung diseases throughout the country.


A glimpse of a scientific seminar on 'Update management of bronchiectasis' at Sylhet MAG Osmani Medical College, organized by CHAB.


Scientific Seminar on Pulmonology Updates at Chittagong Medical College, Chittagong, jointly organized by CHAB & Respiratory Medicine Department of CMC.


Scientific Seminar on Medical Thoracoscopy vs VATS, at Sir Salimullah Medical College, Dhaka, jointly organized by CHAB & Respiratory Medicine Department of SSMC.

Workshop on Mastering the thesis from Research to Defense Organized by The Chest and Heart Association of Bangladesh.

Strengthening Respiratory Care Through Collaboration and Innovation: The Journey of CHAB

The Chest and Heart Association of Bangladesh (CHAB) is the oldest medical organization in the country, dedicated to treatment, research, and awareness of respiratory diseases. Established in 1974 under the leadership of late National Professor Dr. Nurul Islam, with support from the late Professor AQM Nurul Haq and other pioneers, it has grown into a respected body with 395 life members and many general members. On 7th February 2025, a new Executive Committee was formed with Dr. Md. Zahirul Islam Shakil as President and Dr. Golam Sarwar Liaquat Hossain Bhuiyan as Secretary General.

Since its inception, CHAB has worked to unite physicians, chest surgeons, and researchers, fostering collaboration and advancing medical knowledge. Its Annual General Meeting and Scientific Conference bring together experts from home and abroad to share research and treatment innovations. The association has played a vital role in strengthening respiratory medicine in Bangladesh, advocating for new specialist posts, creating respiratory units in government medical colleges, and supporting healthcare professionals. During health crises such as the COVID-19 pandemic, CHAB actively contributed by forming emergency teams, delivering treatment, distributing medicines, and drafting medical guidelines.

Alongside these contributions, CHAB has already undertaken a wide range of important initiatives. It has organized many CME sessions to share respiratory updates among physicians and celebrated various health-related days to raise awareness among both doctors and the public. To build professional skills, the association has arranged workshops on Pulmonary Function Testing (PFT), Interventional Pulmonology (IPC), basic and advanced life support, chest imaging, and research methodology. CHAB also regularly publishes the Chest and Heart Journal and the CHABCON News Bulletin, each twice a year, strengthening medical research and communication.

Moreover, CHAB has been working for developing updated national guidelines for Pulmonary Tuberculosis (PTB) and Extra pulmonary Tuberculosis (EPTB). It has convened round table discussions on various topics and recently arranged expert discussions on new proposals for managing Drug-Sensitive Tuberculosis, in collaboration with BSM, DGHS, NTP, ICDDRB, BRAC, BLF, and the Damien Foundation, ensuring a coordinated and impactful response to national health priorities.

Looking ahead, CHAB seeks to expand its outreach by extending healthcare to rural areas where facilities remain limited. It also aims to increase membership, develop postgraduate training opportunities, prepare additional national treatment guidelines, improve scope of interventional pulmonology, and raise public awareness of lung diseases. Through these initiatives, CHAB is committed to bring respiratory disease care and education in Bangladesh closer to international standards by fostering both national and global collaboration.

Case Report

Congenital Morgagni Hernia with Pulmonary Hypertension in an adult

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Abstract:
Right sided congenital diaphragmatic hernia (Morgagni type) is a rare congenital diaphragmatic defect that typically presents with gastrointestinal or respiratory symptoms. This case report describes a 29-year-old female with a right-sided Morgagni hernia, complicated by pulmonary hypertension. The patient presented with progressive dyspnea and fatigue, with a history of intermittent chest pain. Imaging studies, including chest X-ray and CT scan, revealed a right-sided diaphragmatic hernia. Echocardiography confirmed the presence of pulmonary hypertension, likely secondary to the chronic obstruction and displacement of pulmonary structures caused by the hernia. Surgical repair was planned but unfortunately patient died before surgical intervention. This case highlights the importance of early diagnosis and intervention in congenital diaphragmatic hernias, especially when complicated by pulmonary hypertension, to prevent long-term cardiopulmonary complications.

Introduction:
Congenital diaphragmatic hernias are relatively rare defects that result from incomplete fusion of the diaphragm

during embryonic development. They are classified into several types, with Morgagni hernia, also known as a parasternal hernia, accounting for approximately 2% of all congenital diaphragmatic hernias. Morgagni hernias most commonly occur on the right side and may remain asymptomatic for years or present with nonspecific symptoms such as chest pain, respiratory distress, or gastrointestinal disturbances. Pulmonary hypertension, a condition characterized by elevated blood pressure within the pulmonary arteries, is a known complication of congenital diaphragmatic hernias due to chronic pulmonary compression and impaired lung function.

We present a case of a 29-year-old female who was diagnosed with a right-sided Morgagni hernia complicated by pulmonary hypertension. This case underscores the need for a high index of suspicion in adult patients presenting with unexplained respiratory or cardiovascular symptoms and highlights the importance of timely surgical intervention in preventing irreversible pulmonary complications.

Case report:

A 29-year-old female referred from another facility admitted into this institute with the complaints of increased chest pain, shortness of breath for 25 days. She was treated as a case of community-acquired pneumonia in other facilities (district hospital).

On admission, She was in respiratory distress with tachypnea (25 breaths/min), tachycardia (116 bpm), saturation of oxygen was 85% on room air. BP was normal. Chest examination revealed Percussion note dull, breath sound and vocal resonance were diminished on right lower chest. Bowel sound was present in the same area after breath-holding. On Cardiovascular system examination - palpable P2, left parasternal heave, P2 loud in pulmonary area . Abdomen examination was Unremarkable.

Figure 1: *CXR P/A view showing inhomogenous opacity (Rt) with mediastinal shifting to left.*

Her routine laboratory investigation including white cell count was normal. Electrocardiogram showed Sinus tachycardia. Chest X-ray showed inhomogeneous opacity involving mid and lower zone of right lung. Cardiac shadow shifted towards the left.

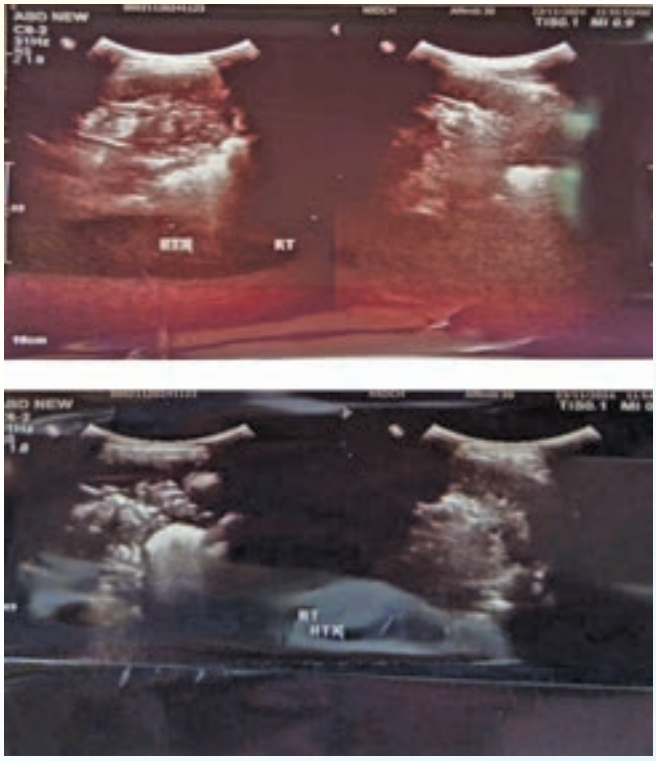

Figure 2: *USG of chest found inhomgenous area having moving echoes within right lung field.*

Ultrasound of chest revealed inhomogeneous area having moving echoes within the right lung. CT scan of chest showed part of the liver and bowel loops are seen in the right hemithorax herniated through the diaphragmatic gap (anterior) causing compression of lung, Liver is elongated & malrotated. In color Doppler Echo – RA & RV was dilated. PASP was 55 mmHg.

Then the patient was referred to the thoracic surgery department for the repair of hernia, but during the preparation for surgery, the patient unfortunately died. Cause of death could not be evaluated. Possible causes may be – corpulmonale, strangulation of hernia, respiratory failure or pulmonary embolism.

Discussion:

Morgagni hernia is a rare congenital diaphragmatic defect that occurs through the anterior portion of the diaphragm, usually on the right side, and accounts for approximately 2-5% of all diaphragmatic hernias. This type of hernia is typically diagnosed in adulthood, with many patients being asymptomatic or presenting with

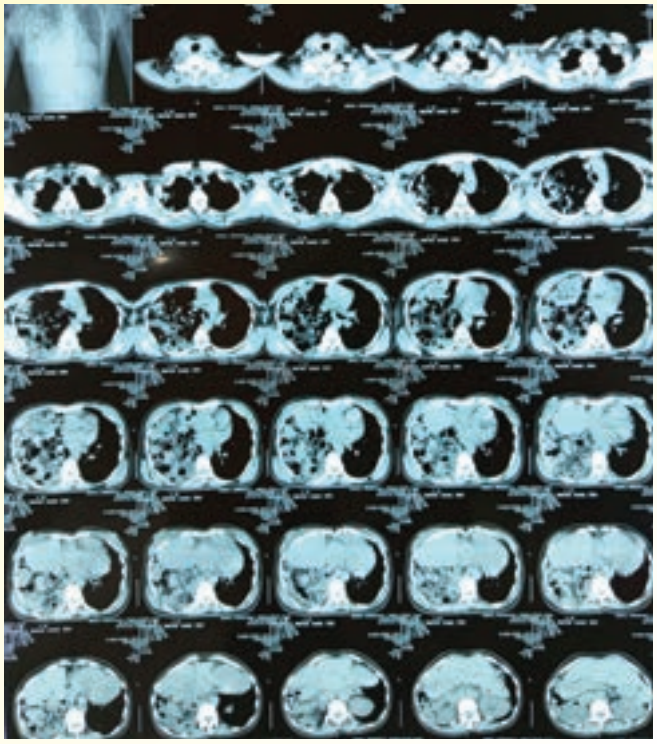

Figure 3: *CECT chest showing herniation of liver and bowel loops through diaphragmatic gap into right hemithorax.*

nonspecific symptoms such as chest pain, respiratory distress, or gastrointestinal complaints. The condition often remains under diagnosed due to its subtle clinical manifestation.

In this case, we present a 29-year-old female diagnosed with Morgagni hernia in the context of pulmonary hypertension. Pulmonary hypertension is a serious condition characterized by elevated pressure within the pulmonary arteries, which can lead to right heart failure and other systemic complications. While pulmonary hypertension has many potential etiologies, including chronic obstructive pulmonary disease, left heart disease, and pulmonary embolism, its association with diaphragmatic hernias, specifically Morgagni hernia, is less well-established. However, there are increasing reports of Morgagni hernia contributing to pulmonary hypertension, likely due to impaired venous return or compression of the pulmonary vasculature.

In the present case, the patient's pulmonary hypertension may have been exacerbated by the hernia through mechanisms such as increased intra thoracic pressure, leading to right heart strain and pulmonary vascular remodeling. The hernia could also cause direct anatomical disruption, affecting lung compliance and contributing to an obstructive pulmonary pattern, thereby worsening the hemodynamics.

Furthermore, it is essential to note that the management of patients with concurrent Morgagni hernia and pulmonary hypertension requires a multidisciplinary approach. Treatment often involves surgical repair of the hernia, which, if left untreated, may lead to complications such as bowel strangulation or perforation. However, in cases where pulmonary hypertension is present, careful perioperative planning is crucial, as the hemodynamic changes associated with the hernia may complicate anesthesia and surgical procedures. Postoperative care should focus on optimizing pulmonary circulation and managing the pulmonary hypertension with pharmacologic agents, such as endothelin receptor antagonists, phosphodiesterase inhibitors, or prostacyclin analogs.

Conclusion :

The association between Morgagni hernia and pulmonary hypertension highlights the importance of early diagnosis and treatment. Clinicians should maintain a high level of suspicion for diaphragmatic hernias in patients with unexplained pulmonary hypertension, particularly in those who present with atypical chest or abdominal symptoms. Surgical intervention, when appropriately timed, can significantly improve patient outcomes, including resolution or stabilization of pulmonary hypertension.

References

1. Boulanger J, Laberge JM, Flageole H, et al. Congenital diaphragmatic hernia: diagnosis and management. J Pediatr Surg. 2004;39(3):369-375. doi:10.1016/j.jpedsurg.2003.11.020.
2. Waseem M, Agarwal S, Ahmed K. Morgagni hernia: a review of diagnosis and management. J Surg Case Rep. 2016;2016(4):rjw080. doi:10.1093/jscr/rjw080.
3. Mahajan S, Saini R, Sharma A, et al. Pulmonary hypertension in congenital diaphragmatic hernia: A review of pathophysiology, diagnosis, and management. Indian J Pediatr. 2012;79(10):1371-1376. doi:10.1007/s12098-012-0777-9.
4. Mazur M, Patil P, Rehder K. The role of imaging in diagnosing Morgagni hernia in adults. ClinRadiol. 2011;66(6):522-528. doi:10.1016/j.crad.2010.12.010.
5. Sunderrajan V, Yadav P, Venkataramanan R. Pulmonary hypertension associated with diaphragmatic hernias: Pathophysiology and clinical implications. Chest. 2013;143(4): 1064-1072. doi:10.1378/chest.12-1810.
6. Anderson CA, Luehr J, Miller SW. Pulmonary hypertension in Morgagni hernia: Report of a case with literature review. J Thorac Dis. 2020;12(6): 2345-2350. doi:10.21037/jtd-20-3470.

ALK Negative Anaplastic Large Cell Pulmonary Lymphoma in a Young Male: A Case Report

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Abstract

Anaplastic large cell lymphoma (ALCL) is a highly malignant CD 30 positive mature T cell non-Hodgkin lymphoma that rarely involves the lung. ALCL is a very rare disease with nonspecific clinical and imaging manifestations. Therefore, appropriate invasive biopsy and immunehistochemistry are necessary for diagnosis. Here we report a case of a 30 year old male presented with cough, fever, weight loss and hemoptysis for last 9 months along with a radiology of bilateral consolidation. He was treated with anti-tubercular drugs as a smear negative case for 5 months, but without any improvement. We re-evaluated the patient with repeat core biopsy of the lung, fibre optic bronchoscopy followed by bronchial biopsy and excision biopsy of the cervical lymph nodes. Histopathology suggested Hodgkin lymphoma. Later on, immunohistochemistry staining confirmed the diagnosis of ALK-negative Anaplastic Large Cell Lymphoma.

Keywords: Anaplastic Large cell Lymphoma, ALK Negative, Pulmonary opacity

Introduction

Anaplastic large cell lymphoma (ALCL) is a highly malignant CD30 positive mature T-cell non-Hodgkin's lymphoma (NHL). It often involves the lymph nodes and skin but very rarely the lungs. Extra-nodal non-Hodgkin lymphomas involving the lungs comprise less than 1% of all NHL. Approximately 40-60% of patients with ALCL have a (2;5)(p23;q35) translocation that expresses nuclear phosphorylated anaplastic lymphoma kinase (ALK). According to expression of ALK immune marker, ALCL can be classified as ALK positive or ALK negative. ALK-negative ALCL is relatively more common among the middle-aged and elderly, with a poor prognosis. Males are more commonly affected than females with a male: female ratio of 1.5:1. Patients typically present with lymphadenopathy and B symptoms with advanced stage III to IV disease. ALK(-) ALCL usually involves lymph nodes at diagnosis (49%) and, less frequently, extra nodal sites (20%). Diagnosis of ALCL is often a dilemma, and misdiagnosis may be inevitable when histology with haematoxylin and eosin alone is employed. The incorporation of immunohistochemistry has made diagnosis straightforward.

Case Presentation

Mr Tashriq, a 30 year old male, non smoker, service holder was presented with cough and fever for the last 9 months, along with scanty hemoptysis and weight loss. He used to be healthy and was on no medication; there was no prior contact with any PTB patient. He had lung consolidation which did not respond with antibiotics, and thus was given anti TB treatment as a smear negative case. After 5 months of anti TB, there was no improvement; rather, his lung consolidation spread bilaterally and he developed respiratory distress. Thereafter, he was referred to this institute for further evaluation.

On physical examination, the patient had a temperature of 100F, BP of 110/70 mmHg, respiratory rate of 22 breaths per minute. A small lymph node of 0.5*0.7 cm, firm in consistency, was found in the left anterior cervical chain. No other areas of lymphadenopathy, subcutaneous nodule, or hepatosplenomegaly was noted. On lung auscultation, a few scattered crepitation were found bilaterally.

Laboratory tests showed neutrophilic leukocytosis with microcytic hypochromic anaemia and high ESR. Serum C reactive protein was elevated at 30mg/l. Other laboratory workup, including urine analysis, liver and renal function, were normal. Abdominal imaging was also normal. A chest radiography demonstrated opacity involving both right and left upper lobes, consistent with mass lesion with bilateral mild pleural effusion without any mediastinal or hilar lymphadenopathy.

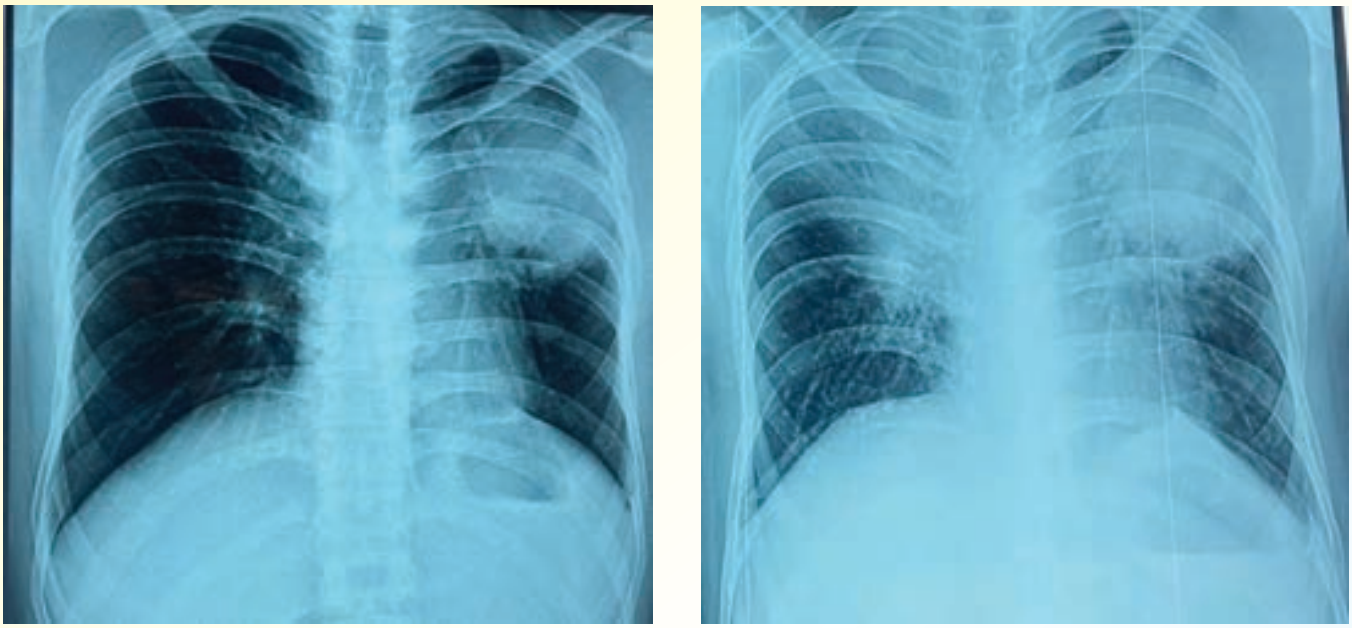

Figure 1: *Chest X-ray PA view showing left sided opacity in first X-ray, and bilateral opacities in subsequent X-ray*

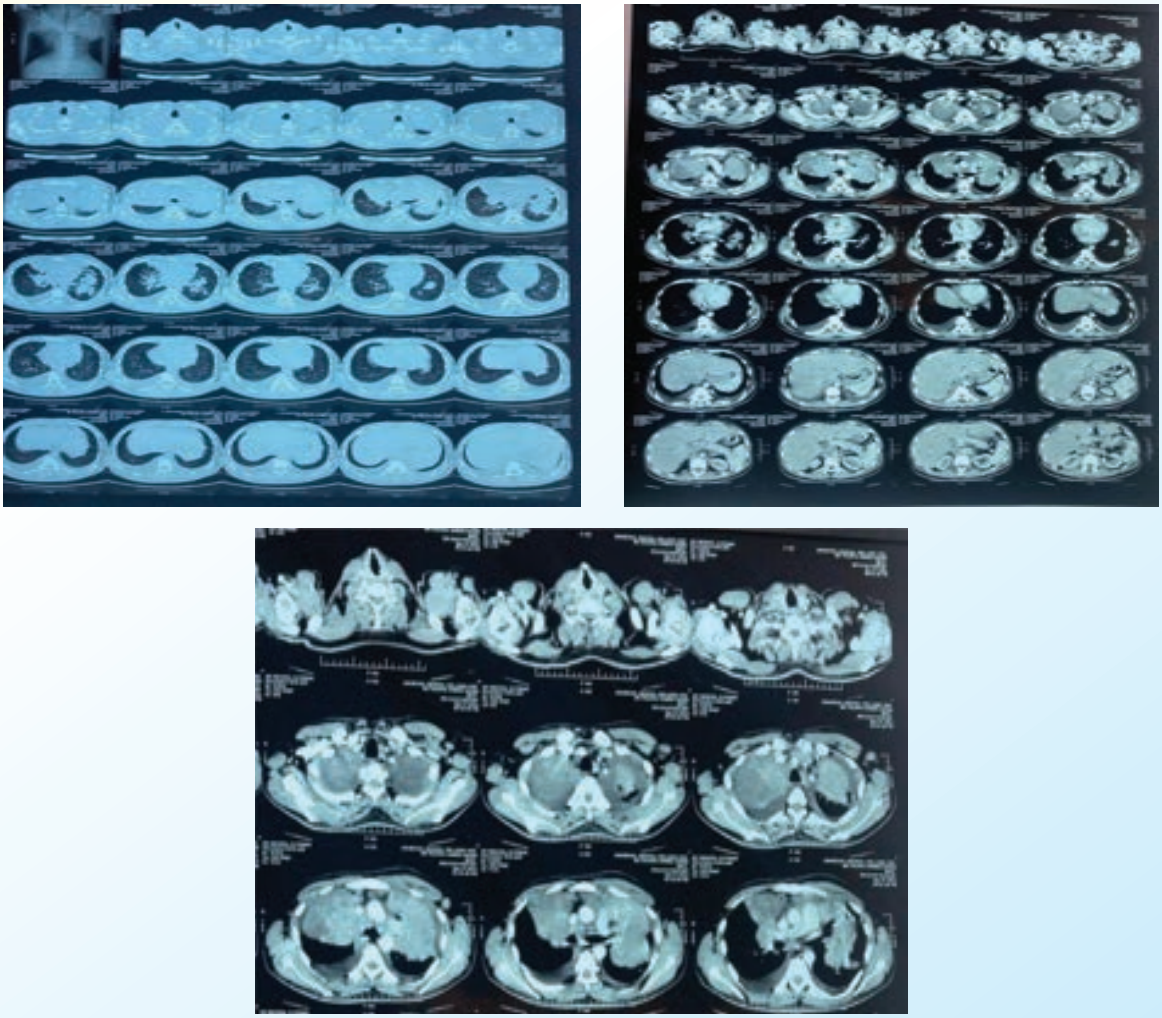

Figure 2: *CT scan of chest with contrast showing mass lesion in upper lobe of both sides with bilateral pleural effusion*

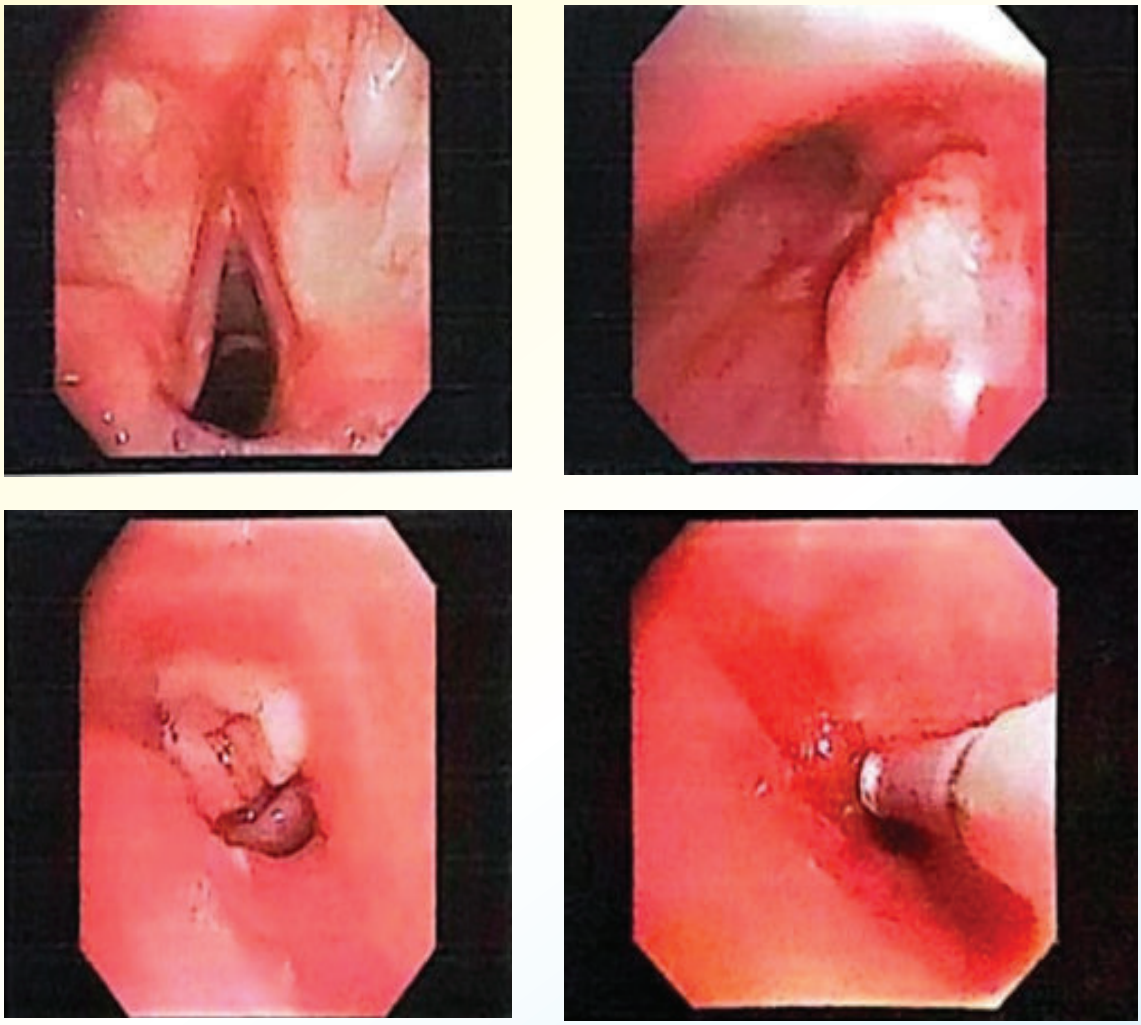

Figure 3: *Fiber optic bronchoscopy showing endobronchial growth involving the lower end of trachea, extending into the right principal bronchus. Another growth was found at the left lower lobe bronchus.*

An image guided core biopsy of the lung revealed organized pneumonia. A fibre optic bronchoscopy was performed, which showed endobronchial growth involving the lower trachea and extending into the right principal bronchus. Another growth was found at the left lower lobe bronchus. Histopathology from the biopsy of bronchial tissue explored few atypical cells suggestive of malignancy and advised for re-evaluation.

Repeat core biopsy of the lung showed features of lymphoma. On subsequent examination, a cervical lymph node was found in left cervical chain and excision biopsy was taken. Histopathology revealed that the nodal architecture is effaced by diffuse infiltration of polymorphous population of lymphocytes, histocytes and eosinophils, admixed with reedsternberg giant cells having binucleation, prominent eosinophilic nucleoli, suggestive of Hodgkin Lymphoma. Immunohistochemical staining of tumor cells demonstrated CD30(+), ALK1(-), EMA(+), CD20(-), CD68(-), CD3(-), PAX5(-), LMP1(-). This confirms the diagnosis of ALK negative anaplastic large cell lymphoma.

Conclusion

ALCL involving the lungs is a very rare case with nonspecific clinical and imaging manifestations. Appropriate invasive biopsy and immunohistochemistry are mandatory for diagnosis. Both morphologically and immunohistochemically, ALCL can mimic many other hematologic and non-hematologic malignancies. Lack of expression of pan T-cell markers and a spectrum of

histologic appearances can be misleading.

References

1. Ferraro P, Trastek VF, Adlakha H, Deschamps C, Allen MS, Pairolero PC. Primary non-Hodgkin's lymphoma of the lung. Ann Thorac Surg. 2000;69:993–997.
2. Ooi G, Chim C, Lie A, Tsang K. Computed tomography features of primary pulmonary non-Hodgkin's lymphoma. ClinRadiol. 1999;54:438–443.
3. Borie R, Wislez M, Thabut G, Antoine M, Rabbat A, Couderc LJ, Monnet I, Nunes H, Blanc FX, Mal H. Clinical characteristics and prognostic factors of pulmonary MALT lymphoma. EurRespir J. 2009;34:1408–1416.
4. Xing X, Feldman AL. Anaplastic large cell lymphomas: ALK positive, ALK negative, and primary cutaneous. AdvAnatPathol. 2015 Jan;22(1):29-49.
5. Das D., Anaplastic large cell lymphoma: the evolution continues, Journal of Cytology. (2011) 28, no. 4, 233–234

Recognizing Excellence

Honoring Members of the Chest and Heart Association of Bangladesh

In the evolving landscape of respiratory medicine, the Chest and Heart Association of Bangladesh (CHAB) has been a gathering place for physicians, researchers, and health professionals since its inception in 1974. Over the years, members of CHAB have contributed to the advancement of respiratory health through their individual work in clinical practice, research, and education.

This year, several of our members have achieved national and international recognition for their outstanding contributions. While these honors are personal milestones, they also reflect the strength and talent within the CHAB community.

Among them:

Dr. Md. Hamza received the Early Career Excellence Award from the Asian Pacific Society of Respirology (APSR) for his impactful work in respiratory medicine.

Dr. Md. Shafiqul Islam was honored with the Norbert Berend COPD Young Investigator Award for his contributions to COPD research and innovation.

Dr. Abdur Rahim Sumon received the Assembly Education Award from APSR for his dedication to educational programming in respiratory health.

Dr. Nowroj Ahmed Raihan, Dr. Manal Mizanur Rahman, Dr. Sadia Sultana Resma, and Dr. Tazrin Farhana each received the Assembly Education Award, recognizing their commitment to strengthening education and capacity building.

Dr. Sheikh Nazmul Islam has been invited to the upcoming ERS Congress to present his abstract titled "Usefulness of blood urea nitrogen to serum albumin ratio for the prediction of intensive care need among patients admitted with community-acquired pneumonia."

We celebrate these achievements as they bring pride to the country and highlight the global relevance of Bangladeshi respiratory medicine.

Beyond individual recognition, CHAB continues to serve as a platform for collaboration, dialogue, and learning. Recent initiatives include:

Observing World Lung Cancer Day in collaboration with the Oncologists of Bangladesh, first time celebration of world cystic fibrosis day in NIDCH. These contributions of CHAB are much praiseworthy.

Launching an E-Library for postgraduate students and teachers, made possible through the dedication of our senior leaders.

As we reflect on these accomplishments, CHAB reaffirms its role as a professional community that celebrates the success of its members and works collectively for better respiratory health in Bangladesh.

What's new in Respiratory diseases?

Dr. Bulbul Parveen Bonny
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Respiratory medicine is constantly being evolved through development of new technologies, new drugs and new ideas. Researches are ongoing on new methods of investigations and modalities of treatments.

The NICE guideline for pneumonia (2025) emphasized on keeping the duration of antibiotic short. The guideline recommended a 3-day course of antibiotics for children 3 months to 11 years with non-severe clinically stable community acquired pneumonia (CAP) without complications or underlying disease. Corticosteroid, preferably intravenous hydrocortisone can be considered for adults with high-severity CAP in hospital for 4 to 7 days.

In treatment of lung abscess, percutaneous transthoracic tube drainage (PTTD) for peripheral abscess and endoscopic catheter drainage (ECD) for central abscess are gaining more attention than surgery in case of delayed response to antibiotics.

The present update of WHO consolidated guidelines on tuberculosis (Module 3, 2024)includes a new class of tests – targeted next-generation sequencing (NGS) which can be used for the detection of drug resistance to the broader list of drugs. The tests can detect resistance to new and repurposed drugs not currently included in any other molecular assays.

Recently, several guidelines (ATS/CDC/ERS/IDSA and WHO) have recommended 4-months regimen for the treatment of tuberculosis.In people aged 12 years or older with drug-susceptible pulmonary tuberculosis, the use of a 4-month regimen of isoniazid, rifapentine, moxifloxacin and pyrazinamide (2HPZM/2HPM) is recommended [conditional recommendation].In children and adolescents between 3 months and 16 years of age with non-severe TB (without suspicion or evidence of MDR/RR-TB), the use of a 4-month treatment regimen of 2HRZ(E)/2HR is recommended [strong recommendation].

In maintenance treatment of COPD, in dyspnea pathway, if adding a second long acting bronchodilator does not improve symptoms, GOLD (2025) suggests to consider adding ensifentrine(dual PDE3/ PDE4 inhibitor, 3 mg inhaled orally BID via standard jet nebulizer with a mouthpiece).In maintenance treatment of COPD, in exacerbation pathway, if patients on LABA+LAMA+ICS with a eosinophil count ≥ 300 cells/μl with chronic bronchitis still have exacerbation, GOLD suggests to consider adding dupilumab (monoclonal antibody, IL-4 and IL-13 inhibitor, 300 mg every 2 weeks subcutaneously).

In bronchiectasis, targeted therapies addressing neutrophilic inflammation like brensocatib, a novel dipeptidyl peptidase 1 (DPP1) inhibitor have shown a significant reduction in bronchiectasis exacerbations and improvement in FEV1. Another DPP1/cathepsin C inhibitor, BI1291583, showed favorable phase 2 results and has now entered a phase 3 clinical trial. Ensifentrine, a dual inhibitor of PDE3 and PDE4 that is already approved by the US FDA for the treatment of COPD, is under investigation for patients with bronchiectasis.Monoclonal antibodies targeting IL-4, IL-5, and IL-13, key cytokines in type 2 inflammation, are now being explored in those 20% of patients with bronchiectasis with this endotype.

The TNM 9th classification for lung cancer was effective from January, 2025. There are only minor differences from the 8th edition. There is no change to the T component.N2 is subdivided into N2a (single N2 station) and N2b (multilevel stations). There is subdivision of M1c status into M1c1 (multiple metastases in a single organ system) and M1c2 (metastases in multiple organ systems).

There is a new interstitial lung disease (ILD) classification by ERS/ATS (2025). In this classification, ILD is broadly classified into four groups, interstitial patterns, alveolar filling patterns, mixed patterns and unclassifiable ILD. Idiopathic diffuse alveolar damage (DAD) replaces acute interstitial pneumonia (AIP) and alveolar macrophage pneumonia (AMP) replaces desquamative interstitial pneumonia (DIP).There are ongoing trials for IPF-combination of pirfenidone and nintedanib, integrin inhibitors, nerandomilast, novel phosphodiesterase 4

inhibitor, lysophosphatidic acid receptor-1 (LPA1) antagonist. There is also a new ERS/EULAR clinical practice guideline for connective tissue diseases associated interstitial lung disease (2025).

Combination treatment are now preferred for pulmonary hypertension from the initial step.FDA has now approved the first activinA receptor IIA inhibitor, sotatercept for the treatment of PAH. Sotatercept is used to increase exercise capacity, improve WHO functional class, and decrease the risk of clinical worsening events in adults with PAH.

The respiratory medicine is upgrading in every aspect from diagnosis to treatment in the developed countries. It is a challenge for Bangladesh to follow the footsteps of the advanced world. We need maximum efforts and dedication to match the challenge.

Research Updates

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National Institute of Diseases of the Chest and Hospital

The Chest and Heart Association of Bangladesh (CHAB) is actively engaged in pivotal pulmonary research. Key ongoing studies include monitoring adverse drug reactions from the BPaLM regimen, developing an antibiogram at NIDCH, and analyzing in-hospital mortality patterns at NIDCH. Another ongoing comparative study evaluating surgical excision versus extended ATT for tuberculous lymphadenitis. Future initiatives aim to determine the prevalence of five major lung diseases in Bangladesh and conduct a non-inferiority randomized controlled trial (RCT) to compare a 4-month drug-sensitive TB regimen with the current standard, seeking optimized treatments within the national context.

The CHABCON News Bulletin is a biannual service that provides the latest news, insights, advance notice of trends and updates, case studies and real world advice about developments promoting the science of Pulmonology and Interventional Pulmonology.

On this World Lung Day 2025, The Chest and Heart Association of Bangladesh reaffirms its commitment to advancing knowledge, collaboration and respiratory health for all. We hope this bulletin will serve as a reminder of our shared responsibility to build a nation free of the burden of respiratory disease.

If you would like to view this archived issues, please see the link below.

https://chestheart.org/journal