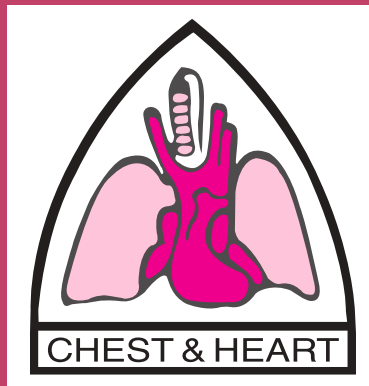


CHABCON NEWS BULLETIN



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World Lung Day 2026



Every year, the Chest and Heart Association of Bangladesh joins the global community in observing World Lung Day on 25 September to raise awareness about respiratory health and strengthen collective efforts to protect lung wellness worldwide. Despite significant progress in healthcare, respiratory illnesses—ranging from chronic obstructive pulmonary disease (COPD) and asthma to lung infections and air pollution-related conditions—continue to pose a major public health challenge across the globe, including in Bangladesh.

The global theme for World Lung Day 2026 is:
“A Lifetime of Lung Health.”

It highlights the importance of protecting lung health at every stage of life—from early childhood development through adulthood and into older age—emphasizing clean air, tobacco cessation, early disease detection, and lifelong preventive care.

On this occasion, we urge healthcare professionals, policymakers, researchers, and the public to unite in safeguarding respiratory health at every age—ensuring clean environments, early screening, and accessible care so that everyone in Bangladesh can enjoy a lifetime of healthy breathing.

Editorial

Dr. Md. Zahirul Islam Shakil, President, CHAB

Dr. Golam Sarwar Liaquat Hossain Bhuiyan, Secretary General, CHAB

Every year, 25th September is observed as the 'World Lung Day' around the globe. The day serves to raise awareness and strengthen strategies about respiratory health and illnesses. The journey is initiated by the Forum of International Respiratory Societies (FIRS) and its partners. World Lung Day unites the governments, organizations, and individuals to promote intervention, prevention, research and equitable access of care to improve lung health worldwide. World lung day comes with a new theme and a new hope every year. The main goal remains to improve the overall lung health and reduce the burden of lung diseases.

"A Lifetime of Lung Health,"- this is the theme of the 'World Lung Day', 2026. The theme highlights the shared responsibility to protect and promote lung health at every stage of life, from the life in womb to the old age.

Lung health refers to how effectively the lungs enable normal breathing through unobstructed airways, healthy lung tissue and proper gas exchange. This is a lifetime process. The lungs need to be taken care of from the time of its development to the end. This means, healthy development in utero to a healthy adult lifestyle.

The development of the respiratory system begins at about the 4th week in utero and continues through adolescence into early adulthood. Maternal stress, tobacco smoking and nutrition influence lung development in utero and beyond. Several studies have found environmental exposures, adverse dietary intake and obesity to be linked to impaired lung growth, failure to reach normal plateau and risk of accelerated decline in lung function leading to development of asthma and chronic obstructive pulmonary disease (COPD) in subsequent life.

Premature birth, low birth weight, early-life exposure to tobacco smoke, early allergic sensitization, recurrent wheezing, recurrent episodes of respiratory syncytial virus (RSV) infection, poor nutrition and air pollution exposure are associated with reduced lung growth and lower FEV1. These findings suggest that early-life exposures have longstanding potential impacts and scope to intervene to prevent or mitigate harmful exposures.

In adulthood, lung health is affected by smoking, vaping, occupational exposures to toxic gases and particles, environmental pollutions, respiratory infections and

chronic diseases. In older age, natural aging of lungs and weaker immune system cause rapid decline in lung function. After the age of about 30, even in healthy people, the lung function begins to decline but the process is gradual. This does not affect the normal life unless there is a chronic lung condition. This is a natural process.

The preventable risk factors are the concerns and need to be focused. Smoking is the most important risk factor for affecting the lung health. The young ones should be encouraged to avoid smoking. Smoking cessation programs are needed to be available for smokers at all levels. Environmental pollution is a global phenomenon. Every nation should come together to address the issue. We need to implicate awareness campaign and strong policy from government and civil society to mitigate the environmental hazards. We sometimes ignore the occupational exposure to toxic and harmful materials. Individuals with chronic lung conditions, especially the young adults, should be thoroughly investigated about their occupational exposures. Early intervention can protect the lung health and prevent some chronic lung diseases.

Respiratory infections and chronic lung diseases cause substantial disability and deaths. We cannot provide reasonable care for every patient. There are many obstacles like limited facilities and limited resources. Equitable health care has to be ensured at every level of health system. People need special respiratory care unit at every district level. Effective treatment of respiratory diseases at the earliest possible time is the cornerstone to protect the lung health.

Everyone needs an active life with regular physical activities pollution free clean air and balanced diet to keep the lungs healthy. Screening for some lung diseases is also necessary, especially in older age. There is scope of vaccination for several respiratory infections. The vaccines should be widely available and cheap. Every individual in need should have the access to get the vaccines.

A lifetime of lung health needs a lifetime opportunity to breathe in healthy air. This needs a lifetime assurance of health care from supporting lung development to maintaining respiratory health throughout adulthood and older age. We can make it happen, together.

Radiation-Induced Lung Injury

Dr. Imtiaz Tarik

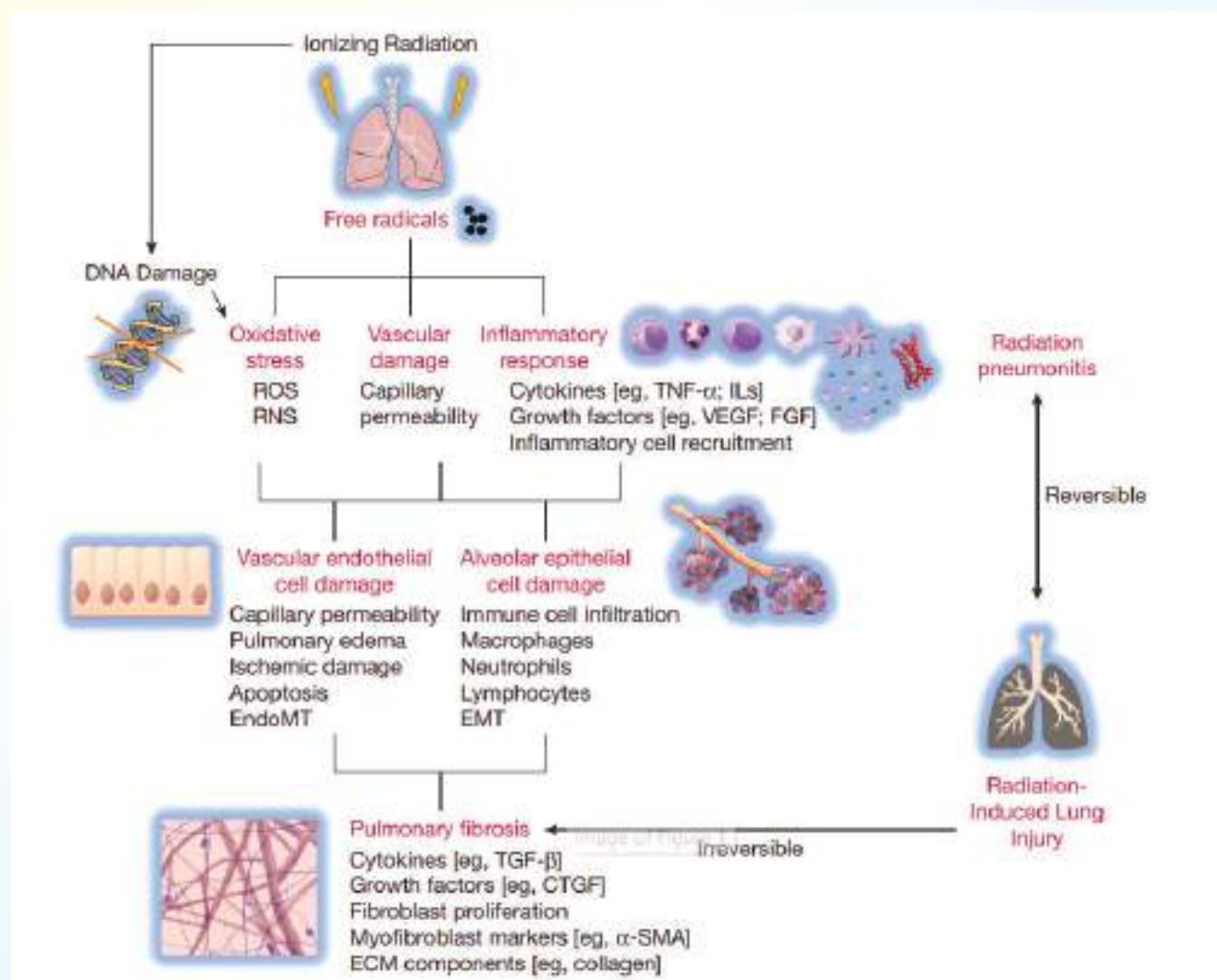
Registrar, NIDCH.

Radiation-induced lung injury (RILI) is an important dose-limiting factor in radiation directed to the thorax and may primarily affect patients treated for lung cancer, breast cancer, lymphoma, or those who receive total body irradiation as part of a bone marrow transplant. Radiation-induced lung injury occurs in approximately 5–58% of patients receiving thoracic radiotherapy, depending on diagnostic criteria and treatment technique. RILI is a severe complication of thoracic RT and can be classified according to time duration into radiation pneumonitis (RP) and radiation fibrosis (RF). RP occurs within 6 months of therapy (most often within 12 weeks), whereas RF occurs > 1 year following therapy.

Pathophysiology: Ionizing radiation generates free radicals and DNA damage, triggering oxidative stress, vascular injury, and inflammation that contribute to radiation pneumonitis. Persistent inflammation causes continued alveolar epithelial and endothelial damage, leading to immune cell infiltration, increased capillary permeability, and pulmonary edema. Over time, chronic tissue injury promotes epithelial and endothelial-to-mesenchymal transition (EMT/EndoMT), ultimately resulting in pulmonary fibrosis.

Predisposing factors:

1. Treatment-related factors:



- Radiation therapy modality: Conventional radiotherapy technique is more prone to RILI than new techniques like intensity modulated RT (IMRT), volumetric arc radiotherapy (VMAT), and stereotactic body radiation therapy (SBRT).
- Lung dose: The total lung radiation dose is the primary driver of RP. Specifically, the risk of lung damage depends on the V20 the percentage of healthy lung tissue exposed to 20 Gy or more.
- Fractionation: SBRT delivers high radiation doses over a short 1–2 weeks, but risk of severe radiation pneumonitis increases significantly if V20 > 10%, the mean lung dose > 6 Gy, or if treatment is administered daily rather than every other day.
- Chemotherapy: Chemotherapeutic agents like doxorubicin, taxanes, bleomycin, cyclophosphamide, vincristine, mitomycin, gemcitabine, and bevacizumab recognized as radiotherapy sensitizers due to their synergistic effect.
- Concurrent treatment with chemo-radiotherapy

2. Tumor-related factors

- Tumor location: mid-lower lung & region adjacent to the pleura are more strongly associated with the development of RP.

- Tumor volume: The most crucial factor that influences the development of RP is thus related to the percentage of lung radiated volume.

3. Patient-related factors:

- Age and sex: over 65 & female
- Comorbid conditions: ILD & COPD
- Smoking: non-smokers

Clinical approach: Acute lung injury causes new or worsening dyspnea, coughing, and rarely, hypoxemia or respiratory failure. Conversely, the chronic phase presents as progressive respiratory insufficiency and worsening dyspnea. Non-specific and rare symptoms include tachypnea, chest pain, fever, hemoptysis and pleural effusion, while physical findings often show rales, friction rubs or lung consolidation.

Imaging: Acute Findings (0–6 months): Typically confined to the radiation field, presenting as diffuse ground-glass opacities, consolidation, ipsilateral pleural effusion, or atelectasis, which may resolve within six months.

Late/Chronic Findings (Up to 24 months): Arising from unresolved acute RP, these involve architectural distortion, linear scarring, dense consolidation, traction bronchiectasis, volume loss, pleural thickening, and advanced fibrosis along the beam path.

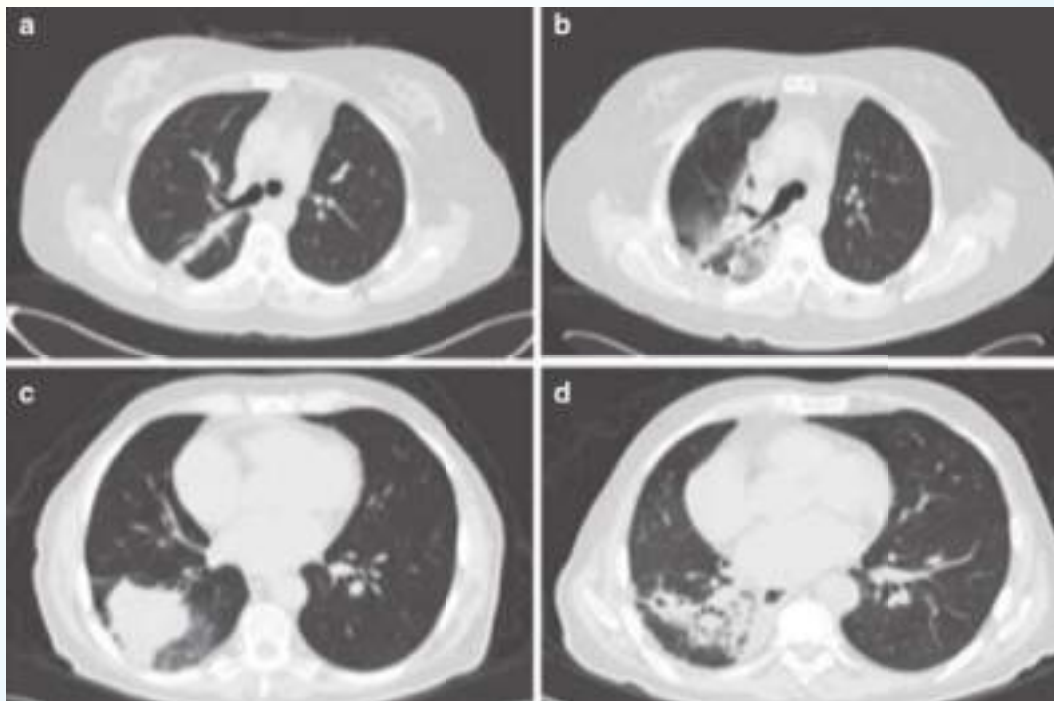


Figure 3: Imaging findings after radiation injury that can mimic other etiologies. a Axial images of a CT scan performed 1-week before RT and three months post-RT; b A ground-glass opacity image with atelectasis; c Axial images of a CT scan with tumor image in the lower lobe before RT and six months post-RT; d Consolidation, bronchiectasis, and a scar-like pattern.

Management:

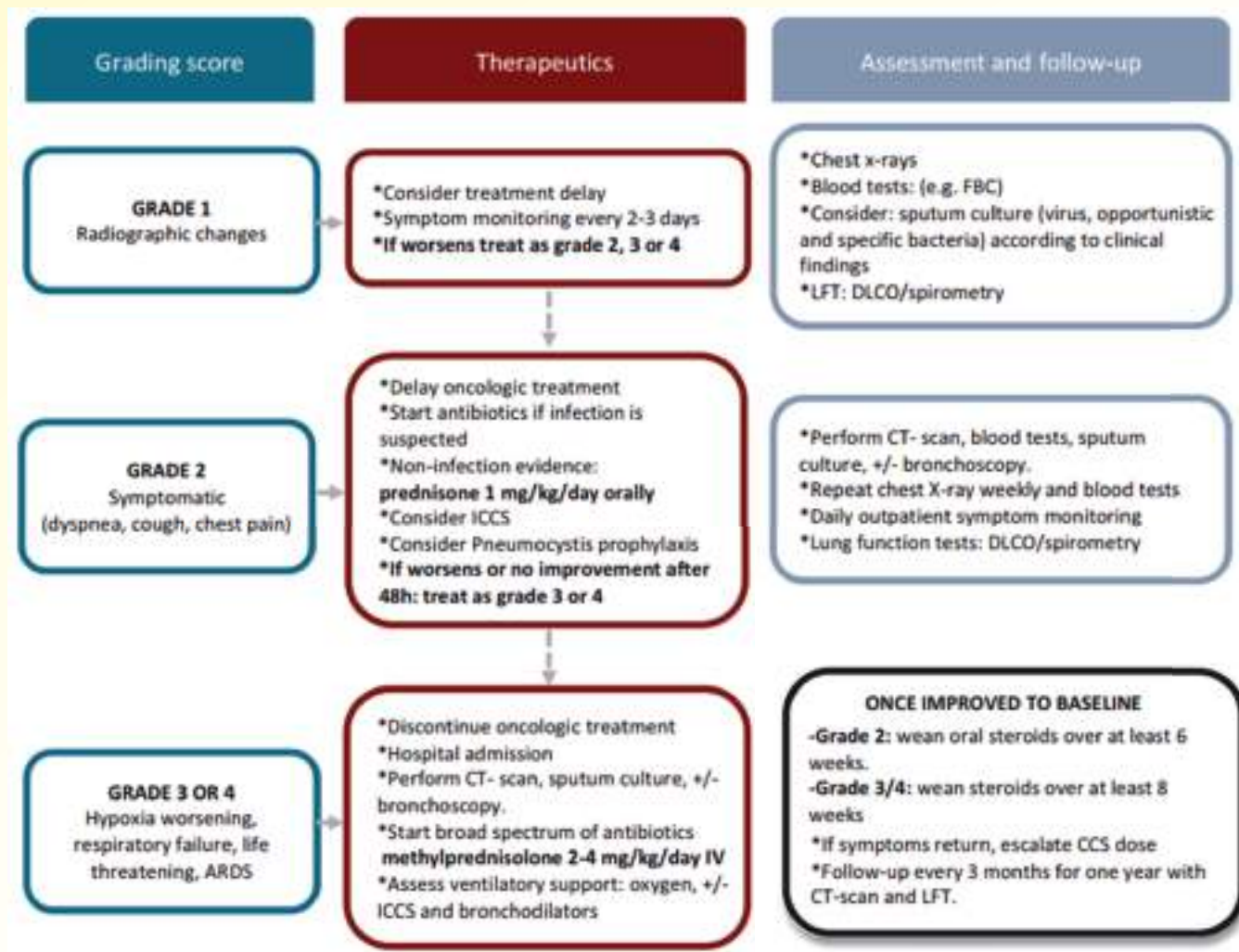


Figure 4: RP Management and follow-up. ARDS Acute respiratory distress syndrome, IV intravenous, MMF Mycophenolate mofetil, FBC full blood count, DLCO Diffuse capacity of carbon monoxide, CCS corticosteroids, ICCS inhaled-corticosteroids, CT-scan computed tomography scan, LFT lung function tests

Pulmonary function tests: Pulmonary function tests (PFTs) can detect radiation-induced lung changes early, often before symptoms appear. Specifically, a mild drop in FEV1 signals bronchial obstruction from tissue swelling, while reductions in FVC and TLC reflect lung stiffening and loss of compliance that scale with larger irradiated volumes. Interstitial tissue damage is indicated by a reduced DLCO, which compromises gas transfer across the alveolocapillary membrane. Ultimately, lower baseline FEV1 and DLCO paired with elevated FeNO correlate with the development of RP, while a 6-MWT/FVC ratio under 4 ft/L acts as a useful predictor for chronic RP.

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Years of Silent Obstruction, One Life-Saving Intervention: From Lung Collapse to Re-expansion

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A retained endobronchial foreign body may remain undiagnosed for months or even years, particularly when the initial aspiration event is forgotten, concealed or not recognised as clinically significant. Chronic cough, progressive dyspnoea and unilateral lung collapse should therefore prompt careful consideration of an occult airway obstruction. Bronchoscopy has a unique role in such cases—not only in establishing the diagnosis but also in providing definitive treatment during the same procedure. The present case illustrates how timely interventional bronchoscopy transformed a long-standing unilateral collapse into a clinically and radiologically improved lung in a young boy.

Case Summary

A 15-year-old boy presented with a 6-month history of cough with scanty sputum and a 1-month history of progressively worsening shortness of breath. There was no history of haemoptysis, fever, weight loss, chest pain, or significant diurnal or seasonal variation.

On examination, his vital signs were stable and SpO₂ was 96% on room air. Respiratory examination revealed clinical features consistent with left-sided lung collapse. Routine evaluation and chest radiography demonstrated left-sided collapse.

A detailed re-evaluation of the history revealed an

important but initially concealed clue: the patient had experienced a possible foreign-body aspiration during his birthday celebration approximately one year earlier but had not disclosed the event for a prolonged period.

In view of persistent respiratory symptoms and unexplained unilateral collapse, flexible fiber optic bronchoscopy (FOB) was performed after appropriate preparation. Bronchoscopy revealed an elongated plastic foreign body impacted at the commencement of the left main bronchus (LMB), completely occluding the lumen and surrounded by mucosal oedema and granulation tissue.

The foreign body was successfully removed under bronchoscopic guidance using Tiger Tooth forceps. Following extraction, a complex stenotic segment of the LMB is noted approximately 3 cm distal to the carina, with associated granulation tissue became evident.

Rather than leaving the patient with a persistently compromised airway, bronchoscopy-guided balloon dilatation was performed. Following intervention, satisfactory luminal patency of the LMB was achieved.

The patient subsequently showed clinical improvement with significant radiological resolution of the left-sided collapse on follow-up chest radiography. He is currently under observation and has been advised to undergo follow-up bronchoscopy after six months.



Figure 1: CXR P/A view showing left sided lung collapse



Figure 2: Bronchoscopic view showing an elongated plastic foreign body impacted in the left main bronchus

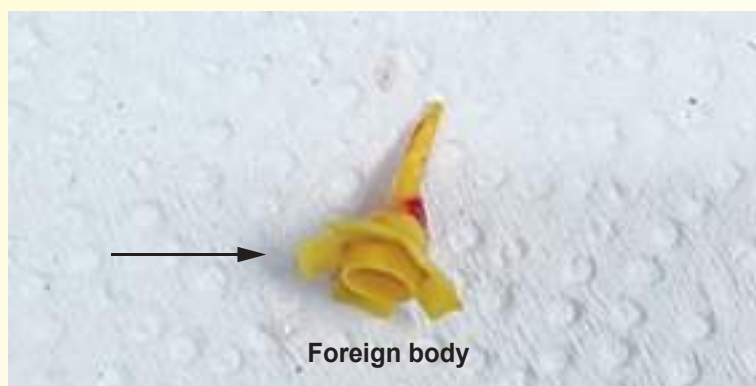


Figure 3: Bronchoscopic removal of the foreign body

Pre procedure FOB

Indication : Follow-up FOB after removal of FB

Medication : 1% and 10% lidocaine spray

Findings :

- Peri-oral : Normal
- Upper airway : The airway is patent in the nasopharynx
- Vocal Cord : Normal. Motion with phonation present
- Trachea : Normal in contour
- Carina : Normal
- Bronchoscopic Findings : Normal endotracheal tube
- Right Lung : No significant findings
- Left Lung : Considered stenosis with granulation tissue was noted at the LMB, 3cm away from carina and large mucousoid secretion coming from stenotic part. Scope couldn't be negotiated further.
- Specimen Taken : BAL taken
- Comments : Please see the description
- Arrested : SC+DB

Dr. Vikram Singh (Dr.)
FRCGS (Lung), FRCGS (Bronchology)
Associate Professor
MRCGP (India)



Figure 4: Follow-up bronchoscopy after foreign body removal showing complex stenosis of the left main bronchus 3 cm away from the carina.

Post procedure FOB



Figure 5: Bronchoscopy guided balloon dilatation of the stenotic segment of the LMB followed by maintained luminal patency.



Figure 6: Pre-procedure CXR P/A view showing left sided lung collapse



Figure 7: Post-procedure after balloon dilatation CXR P/A view showing re-expansion of left lung (significant radiological improvement)

Intervention Corner: The Take-Home Message

This case highlights an important principle of interventional pulmonology:

“Bronchoscopy can be more than a diagnostic procedure—it can be the intervention that rescues a threatened lung.”

In this patient, a concealed foreign-body aspiration had resulted in prolonged complete obstruction of the LMB, complicated by granulation tissue and complex post-obstructive stenosis. Serial bronchoscopic sessions provided both diagnosis and therapeutic airway restoration—foreign-body extraction followed by balloon dilatation.

Contemporary bronchoscopy guidelines recognise bronchoscopy as an important tool for selected airway diagnostic and therapeutic indications, while pediatric literature also emphasises foreign-body aspiration as an indication for bronchoscopy when clinically suspected.

“In interventional pulmonology, finding the obstruction is only half the story—the ability to remove it and restore the airway can change the course of a young patient’s life.”

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Image Contest

Dr. Tazrin Farhana

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A 50-year-old male is presented with progressive shortness of breath with thickening and tightening of skin and dysphagia. His chest auscultation revealed bilateral basal inspiratory crepitation. His HRCT chest shows bilateral basal reticular opacities with ground glass changes more marked on left side. Dilatation of oesophagus is seen in posterior mediastinum. Gastrointestinal manifestations can occur in 90% patients of scleroderma with the most common site is

oesophagus. Oesophageal dysfunction is associated with unfavourable prognosis because they can exacerbate other manifestations of disease, notably lung fibrosis due to micro aspiration. Since medications that are routinely used in SSc (eg, mycophenolate mofetil, nintedanib) may have GI tract side effects, it is important to consider how pharmacotherapy impacts the frequency and severity of GI symptoms in SSc in such type of patients.

Case report on Simultaneous Bilateral Tension Spontaneous Pneumothorax in a child: A Very Rare but Life-Threatening Condition Managed in a Tertiary Center Hospital

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Associate Professor of Thoracic Surgery, NIDCH¹, Assistant Professor of Thoracic Surgery, NIDCH², Medical Officer, NIDCH³, Resident (MS-Phase B, Thoracic Surgery), NIDCH⁴, Trainee (FCPS – Final part, Thoracic Surgery), NIDCH⁵

Abstract:

Simultaneous bilateral spontaneous pneumothorax is a rare entity accounts for about 1.3% to 1.9% of spontaneous pneumothorax and it is more uncommon in children. A 6-year-old boy admitted into hospital with severe respiratory distress and with the features of shock and after evaluation he was diagnosed as simultaneous bilateral spontaneous tension pneumothorax and managed by bilateral tube thoracostomy. After further evaluation no underlying cause of pneumothorax was found. Here we are reporting this case to highlight the importance of early identification and management of rare life-threatening condition like simultaneous bilateral spontaneous tension pneumothorax and save young life.

Introduction: Simultaneous bilateral spontaneous pneumothorax is relatively rare condition and in children, presenting as tension pneumothorax, is more uncommon. It may be primary or secondary but without adequate management in time, it may hamper life.

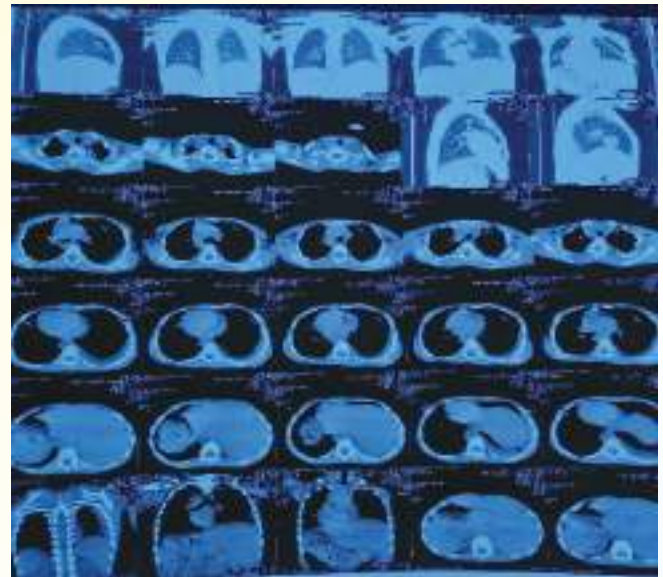
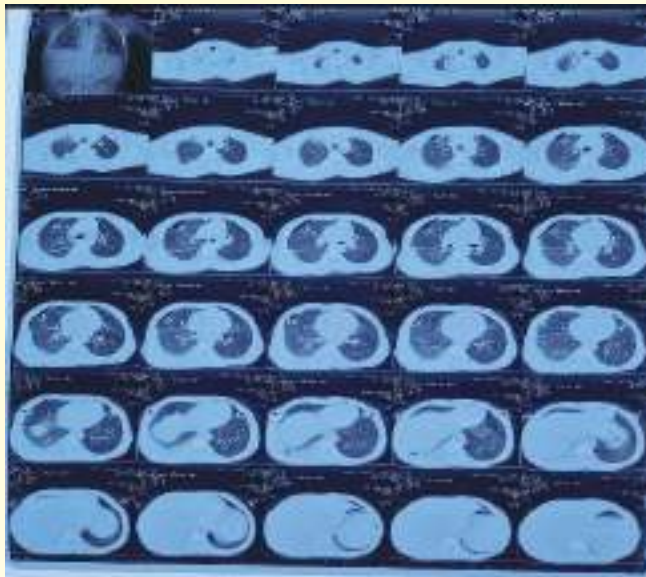
Case:

A 6-year-old boy was admitted into thoracic surgery department with the complaints of severe respiratory distress and bilateral compressive type of chest pain and dry cough for 3 days. Patient had no history of fever or

trauma. His symptoms suddenly developed and gradually worsening. On examination patient's respiratory rate was 50 breaths/min, pulse was 144 beat/min, BP was 60/40 mm Hg, Spo2 was 75% in room air and with 10 L O2 it was 84%. Breath sound was diminished bilaterally. We did an immediate chest x-ray and found Bi-lateral pneumothorax. (Figure: 1). We immediately inserted 20 Fr size tube bilaterally and observed the patient in HDU. Within 24 hours of tube insertion, both lungs were expanded (figure: 2) and patients vital were in normal limit. To find out the cause, we took detailed history of the patient and did clinical examination, but found no clue. His parents had no history of consanguineous marriage and none of his family members were suffering from such kind of illness or none had any history of connective tissue disorder. HRCT of chest was done but no bleb or bulla or other lung pathology was found. (Figure-3). Mild fluid level was seen in right hemithorax in right side and fluid study was done but findings were normal. Fluid for AFB and GeneXpert and culture was negative, cell count in pleural fluid was normal. CBC, Liver function test, Stool for GeneXpert were normal. Genetic study could not be done due to lack of availability of those tests in our institution. We diagnosed him as a case of primary pneumothorax and discharged him with the advice of regular follow up.



CXR PA- Bilateral Pneumothorax and Expansion of both lung after insertion of tube in both side



HRCT- Rt sided mild hydro-pneumothorax and left sided minimal pneumothorax with bilateral IT tube in situ.

Discussion:

Instead of Spontaneous pneumothorax being quite frequent condition, simultaneous bilateral spontaneous pneumothorax (SBSP) is very rare and in case of children, it is extremely rare and representing about 1.3% of all cases of spontaneous pneumothorax.¹

Bilateral blebs or bullae, Birt–Hogg–Dubé syndrome, Marfan syndrome, Ehlers–Danlos, LAM, cystic fibrosis, Tuberculosis, asthma are the few conditions where SBSP may occur, like our case, in some time causes are remain unknown.²

X-ray is the primary investigation to identify the condition. CT scan, sputum examination, genetic study even pleuroscopy or VATS even lung biopsy may be required to identify the cause.²

The treatment of SBSP varies from observation to thoracotomy, depends on patient condition. Conservative management may be followed in asymptomatic case but Tube thoracostomy is the 1st line of treatment if the patient is symptomatic. Pleurodesis, VATS or thoracotomy may be required depends on patient condition.³

Conclusion:

Presenting case highlights the complexities to diagnose and manage SBSP and underscores the importance of establishing thoracic surgical guidelines to ensure favorable patient outcomes.

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CHABCON NEWS

The Chest and Heart Association of Bangladesh (CHAB) marked a landmark year of scientific excellence and clinical advancement in 2026. This year, CHAB observed World Lung Cancer Day 2026 and World Cystic Fibrosis Day 2026, reaffirming its commitment to public awareness and advocacy. The association also published the second edition of its Clinical Guidelines for Pulmonary Tuberculosis, providing updated, evidence-based guidance for clinicians nationwide. In collaboration with NIDCH, CHAB established a Smoking Cessation Clinic, Sleep Disorder Clinic, and DPLD Clinic at the National Institute of Diseases of the Chest and Hospital (NIDCH), strengthening specialized patient care services. The association further extended its educational outreach by organizing a scientific seminar on pleural diseases at Sher-E-Bangla Medical College, Barishal, and seminars at Rangpur Medical College and Dinajpur Medical College on the updated management of asthma and COPD. The year's flagship

event, the 43rd Annual General Meeting (AGM) and International Chest Congress 2026, was held on 5–6 May 2026, preceded by five high-yield pre-congress workshops on 4 May covering pleuroscopy, POCUS, thesis writing, ABG interpretation, and intercostal chest tube insertion. The congress was graced by a distinguished panel of world-renowned faculty, including Prof. Dr. Pyng Lee, Prof. Dr. Ali Zamir Khan, Dr. Tasbirul Islam, Dr. Mathew Edward Cove, Dr. Hari Kishan Gonuguntla, Dr. Kamran Ali, and Dr. Anoma Siribaddana, whose expertise enriched the scientific sessions. More than 50 original articles and case reports were presented during the poster session, reflecting the strong research culture within the association. Looking ahead, more than 10 research papers by CHAB members have been accepted for presentation at the upcoming 30th Congress of the Asian Pacific Society of Respirology (APSR 2026), underscoring CHAB's growing international research footprint.



Unveiling updated Clinical Guideline of Pulmonary Tuberculosis at 43rd AGM & International Chest Congress of CHAB -2026



43rd Annual General Meeting of CHAB



Workshop on Interventional Pulmonology at 43rd AGM & International Chest Congress of CHAB -2026



A Glimpse of Faculties at the International Chest Congress of CHAB -2026



Workshop on POCUS of chest at the International Chest Congress of CHAB-2026



Poster Session with honorable Secretary General at the International Chest Congress of CHAB-2026



World Lung Day- 2026 Celebration at KMSH, organized by CHAB



World Cystic Fibrosis Day-2026 & scientific seminar Organized by CHAB



World Lung Cancer Day-2026 awareness program by CHAB



World Lung Day- 2026 Celebration at Mugda Medical College, organized by CHAB



Unveiling of the 2nd Edition of Clinical Guidelines of Pulmonary Tuberculosis



Interventional Pulmonology session conducted by Prof. Dr. Pyng Lee



Practical Approach to ABG, NIV & PFT session conducted by Prof. Dr. Tasbirul Islam.



"The Honorable Health Minister Inaugurated the Respiratory Critical Care and Interventional Pulmonology Center at NIDCH on 21st September 2026".



World Lung Day- 2026 Celebration at Shaheed Suhrawardy Medical College organized by CHAB



A Case Report of a Less Anticipated Presentation: GPA in Lung

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Abstract:

Granulomatosis with polyangiitis (GPA) is a rare necrotizing vasculitis disease affecting small to medium sized vessels. The exact cause of GPA is not fully understood, but the inflammation is associated with anti-neutrophil-cytoplasmic-antibody (ANCA). GPA involves the upper and lower respiratory tract, systemic vasculitis and glomerulonephritis. This case report describes a young male patient presenting with haemoptysis for two months & irregular fever for one month that did not improve with Sulfamethoxazole-Trimethoprim.

Keywords: Antineutrophil cytoplasmic antibody (ANCA), granulomatosis with polyangiitis (GPA), small infiltrates in the lung, small vessel vasculitis

Introduction

Vasculitis is an autoimmune disorder in which the body's defence system attacks healthy tissues, such as granulomatosis with polyangiitis (GPA) vasculitis. GPA is a small to medium vessel inflammation associated with anti-neutrophilic-cytoplasmic-antibody (ANCA). ANCA activates neutrophils, which increases their adherence to the endothelium to form neutrophilic microabscesses that lead to the formation of granulomas. These granulomas will cause partial or total occlusion of blood vessels, decreasing the blood flow to distal organs. Researchers believe an infection might contribute to the onset of GPA in addition to environmental and genetic factors. GPA affects the blood vessels of the nose, sinuses, throat, lungs and kidneys. The first case reported was by a German medical student in 1931. The severity of the symptoms of GPA varies from one person to another; some patients might have mild symptoms, while others might develop severe or life-threatening symptoms. Patients usually present with nonspecific symptoms such as fever, weight loss, and myalgia. Also, 90% of the patients will have upper respiratory tract problems such as sinusitis, crusting rhinitis, otitis media, mastoiditis and hearing loss. Nearly 50% of patients present with bilateral or unilateral pulmonary infiltrates. About 50-60% of the patients have dermatological involvement, including

purpura of the lower extremities. About 10-20% of patients have rapidly progressive glomerulonephritis leading to chronic kidney disease or end-stage renal disease. Finally, half of the patients have eye involvement, such as development of conjunctivitis or scleritis. Diagnosis requires blood and urine tests, imaging studies, and a biopsy to confirm the diagnosis. Blood tests will show elevated C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and positive ANCA. Urine tests will show abnormal results, including positive red blood cells (RBC) or proteinuria. Computed tomography (CT) and chest X-rays (CXR) will show lesions or hemorrhages in the lungs. Lastly, lung or renal biopsy is the definitive method of confirming GPA.

Case description

This 26 years old normotensive shopkeeper from a lower middle socioeconomic condition presented to us with the complaints of haemoptysis for last 2 months, irregular fever for 1-month, progressive worsening shortness of breath for 1 month. He is an ex-smoker and smoked of 5 pack years. For last 2 months, he has been experiencing hemoptysis for several episodes. He is also having irregular fever which is low grade, intermittent in nature relieved by antipyretic. His fever is not associated with any headache, altered consciousness, night sweat, any loss of weight. He is also suffering from shortness of breath which gradually progressive in nature initially SOB was on severe exertion but now he feels SOB after walking sometimes. It is not associated with any chest pain, palpitation or lying flat. On clinical examination, anaemia present, R/R 20/min, BP-120/70mm Hg, SPO2-90% auscultation of lungs- Bilateral crepitation

All his routine investigations appeared normal except urine RE- presence of RBC indicative of microscopic Hematuria and high ESR and CRP. CXR P/A view showed a persistent bilateral consolidation; HRCT scan of chest confirms bilateral consolidation alongside cavitory lesions. FOB was done which showed Inflammatory lesions. BAL fluid C/S Growth of pseudomonas and klebsiella spp. Serology: C-ANCA strongly positive, RA factor positive but Anti-CCP Negative. Sputum for GeneXpert negative.

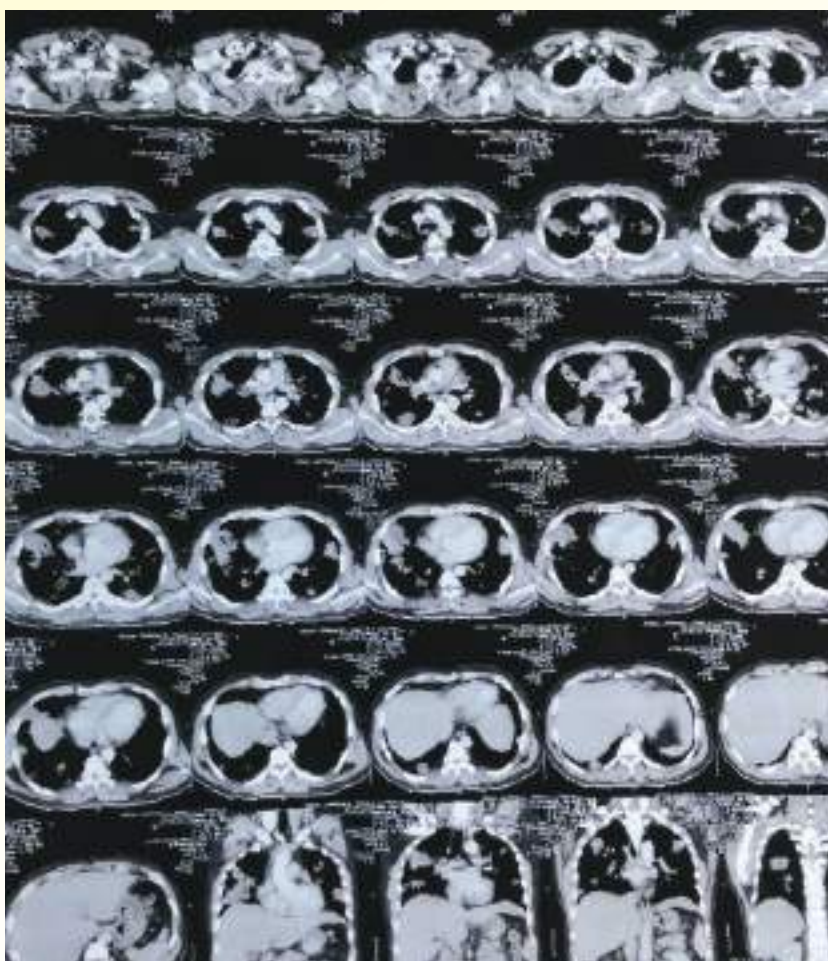


Figure 1: HRCT scan of Chest



Figure 2: HRCT scan of chest

Discussion

GPA is a rare disease that causes inflammation in the blood vessels (vasculitis) and tissues such as the lungs, sinuses and kidneys, which can lead to organ system damage. It can affect people of all ages, but the peak age group is the 5th-7th decade of life. As a result, physicians may be less likely to consider GPA in younger adults, potentially leading to delayed or missed diagnosis despite the presence of suggestive symptoms. Our patient came in complaining of two month-long history of haemoptysis, irregular fever, and SOB, along with elevated ESR and CRP that are suggestive of lymphoma, tuberculosis, bronchiectasis or systemic vasculitis. Further investigations showed that the patient has positive c-ANCA against PR3, which is highly supportive of vasculitis.

This patient exhibited a presentation of GPA, a consolidation and cavitary like lesions in the lungs on chest CT. These features align with the most frequently reported symptoms in GPA. Although there was no evidence of renal involvement at the time of evaluation, the patient was referred to outpatient Nephrology and Rheumatology for ongoing monitoring to help prevent the development of progressive glomerulonephritis. The patient was started on pulse therapy with methylprednisolone and cyclophosphamide followed by a 30 mg dose of steroids for three weeks, then tapered down by 10 mg weekly. His symptoms were improving with the treatment, and she was advised to follow up with the specialists to manage her disease and prevent any worsening prognosis.

Conclusion

This case highlights an uncommon presentation of granulomatosis with polyangiitis (GPA) in a young man, characterized by prominent respiratory involvement without renal dysfunction or vasculitic symptoms. GPA, though more prevalent in older adults, should be considered in patients of all ages who present with unexplained respiratory symptoms, systemic features, and radiologic lung findings. Early diagnosis, ideally confirmed through tissue biopsy, is critical to initiate timely immunosuppressive therapy and prevent disease progression. Treatment typically involves corticosteroids

combined with immunosuppressive agents such as methotrexate or cyclophosphamide, followed by maintenance therapy to minimize relapse risk. This case underscores the importance of maintaining a broad differential diagnosis and close monitoring, even in atypical patient populations.

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CT scan Evaluation of Emphysema

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High-resolution CT (HRCT) is the most sensitive imaging modality for detecting, characterizing and quantifying pulmonary emphysema. It demonstrates areas of decreased lung attenuation with vascular pruning and depending on the subtype, may show centrilobular, panlobular or paraseptal involvement. The distribution and extent of emphysema should be systematically assessed, including upper versus lower lobe and central versus peripheral predominance. CT also identifies associated airway abnormalities, bullae, bronchiectasis,

and complications such as pneumothorax. CT assessment provides an objective evaluation of the extent and distribution of emphysema, facilitating assessment of disease severity, monitoring of progression, prognostication, and treatment planning. It is particularly useful in patients being evaluated for lung volume reduction procedures, where the pattern and regional distribution of emphysema may influence patient selection and therapeutic strategy.

What's New Respiratory Medicine

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A major therapeutic advancement in diffuse parenchymal lung disease (DPLD) / interstitial lung disease is the approval of nerandomilast (Jascayd), a first-in-class phosphodiesterase 4B (PDE4B) inhibitor. Designed to combat progressive pulmonary fibrosis, this medication features dual anti-fibrotic and immunomodulatory mechanisms that clinical trials have shown significantly slow the annual decline in forced vital capacity (FVC), providing a vital new therapeutic avenue for patients.

Inhaled treprostinil is primarily indicated for patients with pulmonary hypertension associated with interstitial lung disease (PH-ILD), where it significantly improves exercise capacity, reduces clinical worsening, and enhances cardiac efficiency. Additionally, clinical trial programs are expanding its role toward treating idiopathic pulmonary fibrosis (IPF) and progressive pulmonary fibrosis (PPF) by leveraging its multimodal anti-fibrotic, anti-inflammatory, and vasodilatory properties directly within the lungs.

The GOLD 2026 report transforms chronic obstructive pulmonary disease (COPD) management by shifting the focus toward early intervention and targeting active biological inflammation. Key updates include lowering the

high-risk threshold to trigger treatment escalation after just a single moderate exacerbation, formally integrating targeted biologics like dupilumab and mepolizumab for eosinophilic phenotypes, and introducing new guidelines for artificial intelligence and digital health tracking.

In asthma, new biologic depemokimab approved for severe asthma with eosinophilic phenotype, which is given twice yearly

Persistent fatigue is the most common symptom of long COVID, but its optimal management is uncertain. In a randomized trial of almost 400 patients with persistent fatigue due to long COVID, fluvoxamine modestly reduced fatigue and improved quality of life after 60 days compared with placebo. These results suggest that fluvoxamine is a promising option for patients with long COVID-associated fatigue who do not respond to first-line nonpharmacologic measures; however, further data are necessary to consolidate its role in therapy.

For MDR TB WHO suggests the use of a 6-month treatment regimen composed of bedaquiline, delamanid, linezolid (600 mg), levofloxacin, and clofazimine (BDLLfxC) in MDR/RR-TB patients with or without fluoroquinolone resistance.

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