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Case Report **Published Date:- 2025-06-04**

Pulmonary Pleomorphic Carcinoma: A Rare Entity Revisited!

Introduction: Pleomorphic Carcinoma (PC) is a subset of poorly differentiated non–small cell lung cancer that is diagnostically challenging because it is a rare malignancy of the lung. It shows varying dual-cell components; spindle or giant cells and epithelial cells.
Method: We report a case of 68-year-old non-smoking female who presented with cough, fever, pain in the left side of chest & weight loss of recent onset and an abnormal shadow on her chest X-ray. Computed tomography of chest revealed a well defined heterogeneously enhancing cavitatory soft tissue lesion in the posterior basal segment of the left lower lobe with mediastinal lymphadenopathy.
Results: Fine needle aspiration cytology& percutaneous lung biopsy confirmed poorly differentiated malignant tumor. Patient underwent a left lower lobectomy. A diagnosis of PC was confirmed after Immunohistochemistry (IHC). Mutation analysis revealed an EGFR exon 21 mutation within the tumor cells. The patient is on Gefitinib based chemotherapy and has remained disease-free for three years post-surgery.
Conclusion: PC of the lung is a rare pathological entity. Definite diagnosis may only be made on a resected tumor along with the use of IHC. Surgical resection is the main modality of the treatment. Such rare cases should be documented to establish an optimal management plan and to provide a further insight to targeted therapy.

Review Article **Published Date:- 2025-05-09**

Sotatercept in the Treatment of Pulmonary Arterial Hypertension: A Comprehensive Narrative Review of Mechanism, Efficacy and Future Directions

Rationale: Pulmonary Arterial Hypertension (PAH) is a progressive vascular remodeling disease with elevated pulmonary vascular resistance that is lethal. While therapeutic progress was recently made with endothelin, nitric oxide, and prostacyclin pathway-based therapy for the treatment of PAH, the disease is currently incurable with a high cost of morbidity and mortality. Sotatercept, a new activin receptor IIA-Fc fusion protein, may prove to be a game-changer as a therapeutic agent for the treatment of PAH by regulating the growth factor signaling aberration of PAH.
Methods: It is a narrative review of evidence for the drug Sotatercept for Group 1 PAH from a systematic literature search for clinical trials, mechanism studies, and regulatory data up to 2024. Pivotal clinical trials such as PULSAR, SPECTRA, STELLAR, and ZENITH were evaluated for efficacy, safety, and comparative results.
Results: Sotatercept is a TGF-? family member ligand trap that rebalances activin/BMP signaling to target vascular remodeling. Clinically, striking effects were shown with exercise (40.8 m improvement in STELLAR 6MWD), pulmonary hemodynamics (PVR reduction of 146-240 dyn·s·cm-5 in PULSAR), as well as clinical measures (76% reduction of composite morbidity/mortality through ZENITH). On the background with an acceptable drug safety profile of predominantly hematologic effects, as well as injection site reaction, benefits were achieved. Comparison with analyses implies at least similar, if superior in some dimensions, efficacy of current PAH therapies.
Conclusion: Sotatercept is a new therapeutic option for PAH as the first drug to act on the activin/BMP pathway. With its strong effect on several clinically relevant end points, it is a “fourth pillar” of PAH therapy. Clinical trials will determine its place in the algorithm, ascertain other combinations, and potentially identify its utility for other types of pulmonary hypertension.

Commentary **Published Date:- 2025-05-09**

Post-COVID Pulmonary Fibrosis: Pathophysiological Mechanisms, Diagnostic Tools, and Emerging Therapies

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Post-COVID pulmonary fibrosis has emerged as a significant long-term complication among survivors of severe SARS-CoV-2 infection. This review highlights the underlying pathophysiology, diagnostic modalities, and recent advances in the diagnosis and management of post-COVID pulmonary fibrosis. As global cases of COVID-19 continue to evolve, understanding and addressing this emerging chronic respiratory condition is critical for long-term patient care.

Case Report **Published Date:- 2025-05-06**

Investigation of Bronchoscopy Associated Pseudo-infections

Introduction: Bronchoscopy could lead to local spread of pre-existing infection, spread of infection from one patient to another if the bronchoscope is disinfected inadequately, or, isolation of microorganisms from bronchoscopic specimens in a patient who is clinically not infected, i.e., pseudo-infection. This study is one such investigation of an outbreak of bronchoscopic pseudo-infections in a tertiary care hospital.
Materials and methods: Bronchoalveolar lavage (BAL) samples were inoculated onto MacConkey Agar and 5% Sheep Blood Agar and incubated at 37 °C overnight. The growths obtained on culture media were processed for identification and antimicrobial susceptibility on Vitek 2 Compact as per manufacturer's instructions. To investigate the outbreak, 5 mL - 10 mL of sterile water was flushed through the channels of disinfected bronchoscope and collected in a sterile container. The samples were centrifuged and inoculated onto MacConkey Agar and 5% Sheep Blood Agar. The growths obtained were further processed similarly as the BAL samples were processed. Environmental swabs collected from the bronchoscopy unit were also processed as the procedure mentioned above.
Results: Bronchoalveolar lavage of 3 patients in a period of 1 week were contaminated with multidrug resistant Klebsiella pneumoniae. Two out of five bronchoscope fluid samples were also contaminated with Klebsiella pneumoniae. Among the swabs collected from bronchoscope unit, Klebsiella pneumoniae was isolated from the detergent box of the endowasher.
Conclusion: The risk of propagation of infection via a bronchoscope can be evaded by proper reprocessing and improving the sterilization practices.

Case Report **Published Date:- 2025-02-05**

Unveiling the Impostor: Pulmonary Embolism Presenting as Pneumonia: A Case Report and Literature Review

Pulmonary Embolism (PE) can present with symptoms resembling pneumonia, creating a diagnostic challenge, particularly in patients with comorbidities. We report the case of a 67-year-old male who presented with cough, hemoptysis, shortness of breath, fever, and pedal edema. Initially diagnosed with consolidation based on chest X-ray findings, he was treated with antibiotics. However, persistent symptoms prompted further evaluation, leading to the diagnosis of PE with pulmonary infarction and deep vein thrombosis on computed tomography pulmonary angiography and Doppler ultrasound. This case highlights the need to consider PE in the differential diagnosis of consolidation, particularly in high-risk individuals, to avoid delays in appropriate management.
