\*\*To Bronchoscope or Not? Bronchoscopy on Patient with Concomitant Fluid Overload and Community Acquired Pneumonia\*\*

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\*\*Introduction\*\*

Indications for bronchoscopy in an emergency department setting include airway obstruction, lavage of bronchopneumonia patients, and adrenaline lavage to stop pulmonary hemorrhage. We present a case in which a patient presented with fluid overload but was suspected to have a concomitant lower respiratory infection.

\*\*Case Description\*\*

A 40-year-old gentleman with underlying diabetes mellitus, hypertension, dyslipidemia, congenital heart disease, and congestive cardiac failure presented to the Emergency Department with shortness of breath for 2 days. He also had bilateral lower limb swelling for 2 weeks. The patient had no fever. Upon initial presentation, the patient had supraventricular tachycardia at 184 beats per minute, which reverted to sinus rhythm with verapamil after 3 doses of adenosine failed. The patient was treated for acute decompensated heart failure and given furosemide. His initial oxygen supplementation of CPAP failed, and he subsequently required intubation. Bedside ECHO showed poor left ventricle contractility. Bedside lung ultrasound showed irregular pleura, scattered B lines, and shred sign on R1-R4 and A lines on L1-L4. CXR showed bilateral haziness. The ABG showed SpO2 92% and PaO2 68 mmHg. The ALT was 165 and AST 383 U/L. A diagnosis of acute decompensated heart failure with concomitant sepsis secondary to community-acquired pneumonia complicated with SVT, acute kidney injury, and transaminitis was made. Bronchoscopy was performed, revealing copious thick, yellowish phlegm, which was suctioned out. Post-bronchoscopy, the PaO2 improved to 212 mmHg. The CXR opacity improved. The patient was admitted to the ICU and subsequently extubated. The blood parameters improved, and the patient was transferred to a regular ward and subsequently discharged.

\*\*Discussion\*\*

Bronchoscopy is not typically indicated for cases of fluid overload. However, this case highlights the advantages of bronchoscopy in a case of fluid overload that is complicated by a lung infection.

\*\*Conclusion\*\*

This case illustrates the usefulness of bronchoscopy to improve oxygenation in a case of concomitant fluid overload and pneumonia. It helps reduce secretions obstructing the bronchial tree and improves oxygenation.