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Asthma-COPD Overlap Syndrome (ACOS) in ED: Challenges in Early Recognition and Management

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Introduction. Asthma-COPD Overlap Syndrome (ACOS) is a complex entity characterized by overlapping features of asthma and chronic obstructive pulmonary disease (COPD), resulting in more severe respiratory impairment and worse outcomes.

Case Description. We describe three case series presented to ED with acute shortness of breath (SOB). Initial treatment was directed toward either asthma or COPD exacerbation. Case 1, a 47-year old man with acute SOB precipitated by URTI with hyper-inflated lungs; Case 2, a 53-year old man underlying chronic smoker, childhood asthma presented with productive cough and SOB and Case 3, a 43-year old man with history of allergies, chronic smoker, asthma and was treated for community acquired pneumonia.

Discussion. Differentiating between asthma, COPD, and ACOS is essential in acute care setting as management strategies differ significantly. Asthma is typically characterized by reversible airway obstruction whereas COPD presents with irreversible obstruction and is strongly associated with smoking history. ACOS, displays characteristics of both conditions, including persistent airflow limitation combined with airway hyper responsiveness. Misdiagnosis can result in suboptimal treatment, as ACOS requires a combined therapeutic approach involving inhaled corticosteroids and bronchodilators.

As in our case, detailed clinical evaluation, including comprehensive history-taking and, including spirometry findings, revealed features consistent with ACOS. In Case 1, ACOS should be suspected, Case 2, inhaled corticosteroid should be started early and in Case 3, ACOS was overlooked. Emergency physicians must maintain a high index of suspicion for ACOS in patients exhibiting mixed clinical features, particularly in older adults or smokers presenting with atypical patterns of exacerbation.

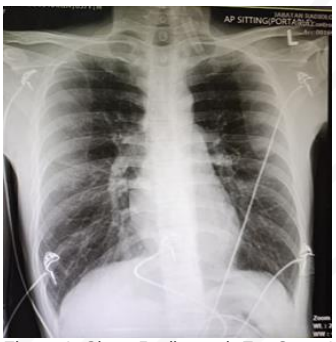

Figure 1. Chest Radiograph For Case 1

Figure 2. Chest Radiograph For Case 2

Conclusion. Early identification of ACOS is mandatory for initiating appropriate evidence-based treatment and planning a long-term management. Early recognition facilitates not only improved acute stabilization but also appropriate respiratory specialist referral and structured follow-up. Increasing awareness of ACOS is vital to improving clinical outcomes and optimizing resource utilization especially in acute care settings.

References.

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