



Editorial

Pneumothorax, pneumomediastinum, subcutaneous emphysema: serious complications of asthma

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Bronchial asthma, is a quite common disease characterized by the chronic inflammation of the airways. It is due to the interaction of genetic with environmental factors. Currently, bronchial asthma is regarded as a public health problem, since its prevalence is constantly increasing worldwide. Common symptoms associated with asthma include repeated episodes of wheeze, dyspnoea, chest tightness and cough. Although commonly most asthmatic episodes are resolved with medical treatment, at times serious complications can deteriorate the clinical picture. Among these complications, the simultaneous spontaneous bilateral pneumothorax, the subcutaneous emphysema and the pneumomediastinum are life threatening complications.

Pneumomediastinum is reported more commonly in the second to fourth decades of life. Pneumomediastinum can be caused by trauma, diving, cocaine inhalation, strenuous physical exercise, oesophageal perforation, interstitial lung disease and obstructive lung disease. In the context of asthma exacerbations, pneumomediastinum can be caused by the mechanical trauma of the lung induced by the forced inhalation [1]. Clinical symptoms of pneumomediastinum include chest pain, dyspnoea, and neck swelling due to subcutaneous emphysema. Pneumomediastinum is usually a self-limiting disease that resolves with conservative treatment, however, in the case of concurrent pneumothorax, pneumomediastinum could lead to a fatal outcome. Misdiagnosis and delayed treatment of pneumomediastinum could lead to hemodynamic instability.

Pneumothorax, the presence of air in the pleural cavity can be either spontaneous or traumatic. Spontaneous pneumothorax can be idiopathic, that appears in otherwise healthy patients, or secondary when associated with underlying lung disease including infectious diseases I.e. tuberculosis, congenital diseases i.e. cystic fibrosis and chronic obstructive pulmonary diseases. Simultaneous spontaneous bilateral pneumothorax has been described in patients with asthmatic exacerbations [2]. The symptoms of simultaneous spontaneous bilateral pneumothorax are dyspnoea and pleuritic pain that may be extremely severe and disproportionate to the extent of pneumothorax. Diagnosis may be difficult as the symptoms might be attributed to the asthmatic exacerbation. Thus, chest radiography is needed for confirmation of diagnosis.

In conclusion, asthmatic exacerbations can be complicated by serious complications and potentially life threatening complications as pneumothorax, pneumomediastinum, subcutaneous emphysema. Although these complications are rare, clinicians should be aware of these, as the diagnosis may be delayed as the symptoms overlap with those of the asthmatic exacerbation. High index of suspicion is needed as well as prompt radiography for the confirmation of diagnosis.



References

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