

LETTER TO THE EDITOR

Letter to the editor in response to “Pneumomediastinum and pneumopericardium, a rare complication of asthma: a case report”

Carta al editor en respuesta a “Neumomediastino y neumopericardio, una rara complicación del asma: a propósito de un caso”

Santiago Campbell-Silva^{1,a}  

¹ Clínica Mediláser, Florencia, Colombia.

^a Internist.

Dear Editor:

I have reviewed an intriguing case, published in your journal by Velásquez Marulanda et al. ⁽¹⁾, concerning pneumomediastinum and pneumopericardium in a patient.

The authors assert, with regard to the definition of spontaneous pneumomediastinum (SPM), that “Pneumomediastinum is a relatively rare condition in which there is the presence of free air in the mediastinum that is not caused by surgery, a medical procedure, or trauma.” However, I contend that this definition should no longer be used, as it is both ambiguous and lacks the necessary specificity.


The etiology of true primary SPM - and it is preferable to term it primary to distinguish it from secondary SPM - cannot be associated with any predisposing factors, triggering events, or iatrogenic or non-iatrogenic trauma. Furthermore, it must manifest in otherwise healthy individuals ⁽²⁾. Given these characteristics, SPM is an exceptionally rare event and is scarcely documented in the medical literature ^(3,4).


Historically, pneumomediastinum has been classified into two categories: spontaneous, when it occurs without an apparent cause, and secondary, when an identifiable triggering event is present. For pneumomediastinum to be classified as truly spontaneous, it must not have any predisposing diseases or precipitating factors. This is why it is more accurate to refer to it as primary. In addition, the classification of “spontaneous” or “secondary” remains imprecise due to many predisposing factors and triggering events involved in what is currently labeled as “spontaneous” ⁽⁵⁾. This classification has been in use for nearly a century, yet it has remained largely unchallenged and has become somewhat of a “dogma”. The current classification tends to reflect clinical circumstances rather than pathophysiological understanding, resulting in more confusion than clarity. Medical terminology should ideally reflect underlying pathophysiological processes, and when traditional terms lead to confusion between distinct pathophysiological mechanisms, it is prudent to revise them ⁽⁶⁾.

As with the majority of published cases, SPM is not truly “spontaneous,” but rather secondary to multiple factors (predisposing, precipitating, or both). Therefore, if pneumomediastinum is secondary, it cannot be classified as “spontaneous,” as these categories are mutually exclusive. In the case presented, it cannot be considered

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Correspondence:

 Santiago Campbell-Silva

 santiago.campbell@gmail.com

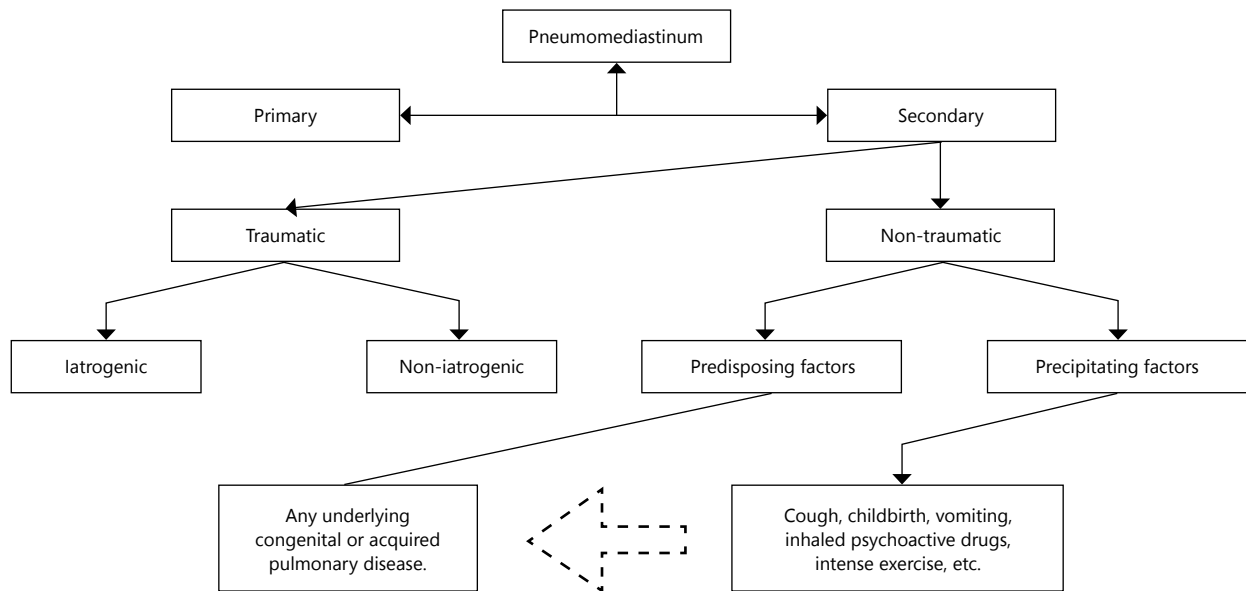


Figure 1. Proposed classification of pneumomediastinum ⁽⁵⁾

* Precipitating factors may act on the predisposing factors.

spontaneous (primary), but rather secondary to a predisposing condition such as asthma. It is essential that medical language maintain clarity and precision to avoid confusion and ambiguity.

If pneumomediastinum is associated with a predisposing factor that compromises the pulmonary structure, whether congenital, hereditary, or genetic (e.g., bronchiectasis, cystic fibrosis, surfactant abnormalities), or acquired (e.g., asthma, chronic obstructive pulmonary disease [COPD], interstitial lung disease, COVID-19), it cannot be considered spontaneous, as the underlying disease predisposes the individual to it. Similarly, pneumomediastinum resulting from a triggering event (e.g., coughing fits, labor, intense exercise, inhalation of drugs, mechanical ventilation) in either a healthy individual or one with an underlying pulmonary condition cannot be classified as spontaneous, as there is an immediate triggering factor involved. These factors may occur simultaneously and result in pneumomediastinum, as observed in cases of coughing or vomiting in patients with COPD. In such instances, the pneumomediastinum would be classified as secondary.

It is preferable to adopt a terminology that not only considers the etiology of pneumomediastinum but also provides guidance for selective management strategies aimed at improving patient care, while remaining easy to remember and useful for teaching ⁽⁶⁾ (see Figure 1).

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