

## MILD SYMPTOMS IN PRIMARY SPONTANEOUS PNEUMOTHORAX IN THE EMERGENCY ROOM

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### **ABSTRACT:**

*THIS ARTICLE ANALYZES THE CASES OF PRIMARY SPONTANEOUS PNEUMOTHORAX PRESENTED IN THE EMERGENCY UNIT OF THE EMERGENCY UNIVERSITARY CLINICAL HOSPITAL BUCHAREST IN THE PERIOD JANUARY – DECEMBER 2014. IT EMPHASIZES THE HIGH FREQUENCY OF CASES SHOWING ONLY MILD SYMPTOMS, IN YOUNG PATIENTS, AND THE RISK OF UNDERDIAGNOSIS OF THE CONDITION.*

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**KEY WORDS:** PNEUMOTHORAX, SPONTANEOUS, MILD SYMPTOMS, SMOKERS, YOUNG PATIENTS

### **INTRODUCTION**

Pneumothorax is defined as a collection of gas in the pleural space that results in complete or partial collapse of the lung. A pneumothorax may occur spontaneously, or may be secondary to underlying lung disease, chest trauma, mechanical ventilation, or perforated esophagus.

Spontaneous pneumothorax most commonly occurs in previously healthy adults, mainly smokers, between 20 and 40 years of age. In such patients there is a strong tendency toward recurrence of the pneumothorax. Air leaks into the pleural space due to rupture of small blebs on the surface of the visceral pleura. These blebs tend to be situated at the apex of the lung, perhaps due to the more negative pleural pressure around the lung apex.

Symptoms include sudden onset unilateral pleuritic chest pain, dyspnea, and sometimes a cough. Classical physical signs may or may not be present (depending upon the size of the pneumothorax): tachypnea, tachycardia, hyper-resonant percussion and diminished breath sounds over the affected side. The chest radiography reveals a visible visceral pleural edge with no lung markings between this edge and the chest wall.

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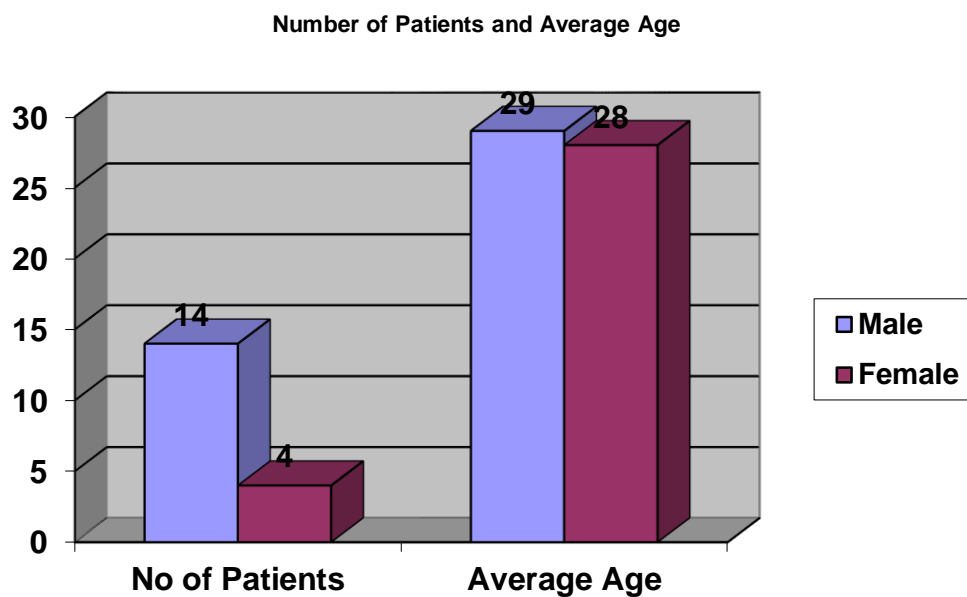
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Approximately 50 percent of patients with spontaneous pneumothorax have a recurrence, and the incidence of further recurrence is even higher following the second episode.

Management of spontaneous pneumothorax includes watchful waiting, with or without supplemental oxygen, simple aspiration, or tube drainage, with or without medical pleurodesis

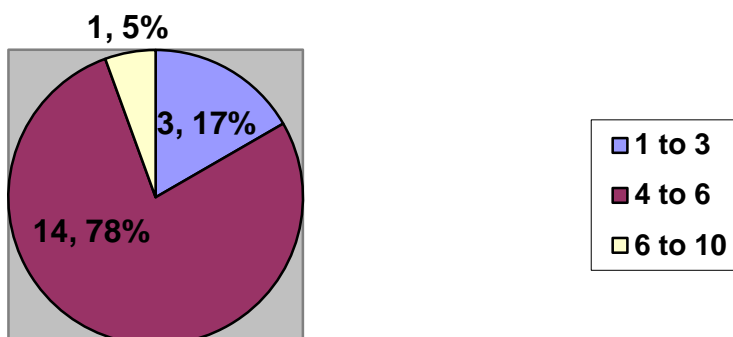
### MATERIALS AND METHOD

This article brings up the experience of the Emergency Unit – Emergency University Clinical Hospital Bucharest in the period January – December 2014. There were 18 cases of spontaneous pneumothorax presented at the ER in this time period, out of which 14 were male, and only 4 female, with an average age of 29 for the male patients and 28 for the female.



Out of the 18 cases, 12 were smokers (66%). The commonest complain was pleuritic chest pain, of moderate intensity . On the Numeric Rating Scale for pain, only one patient accused severe pain, with an intensity of 9.

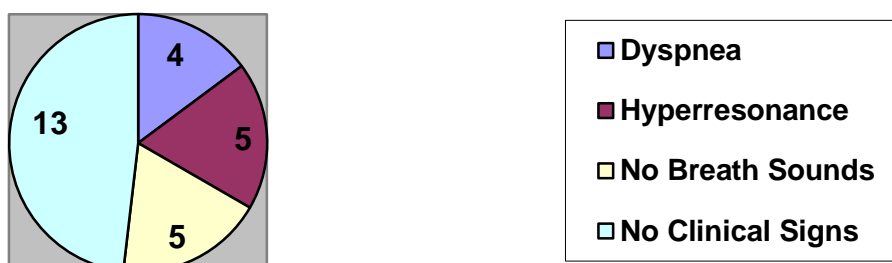
## Pain Intensity



Dyspnea was a less common complaint, only 4 patients presented with shortness of breath, out of which only 2 presented with O<sub>2</sub> saturation under 90%.

Physical examination didn't reveal in more than half of the cases the classical physical signs of tachypnea, hyper-resonant percussion and diminished breath sounds. All patients were further investigated, arterial blood gas samples and chest radiographs were taken in all cases.

## Clinical Findings





**Figure 1** Right spontaneous pneumothorax in a 25 year old male

All presented cases were admitted in the Thoracic Surgery clinic of the Emergency Universitary Clinical Hospital Bucharest, the usual treatment consisting in chest tube drainage.

### **CONCLUSIONS**

Spontaneous pneumothorax affects mainly young people, usually males and smokers, which may present with mild symptoms in the ER, thereby the risk of easily underdiagnosing the condition, especially taking into account the overcrowding of ER units in Romania. The diagnosis of spontaneous pneumothorax must be considered in all cases of chest pain, with or without other signs or symptoms, especially in the presence of risk factors like young age and smoking.

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