



# SPONTANEOUS PNEUMOTHORAX IN A PROFESSIONAL DIVERS CANDIDATE; CASE REPORT

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## BACKGROUND

Spontaneous pneumothorax (SP) is considered as absolute contraindication for diving. The main concerns are the possibilities of the developing tension pneumothorax during ascent if a recurrence of SP occurs during a dive, and pulmonary barotrauma facilitated by subpleural bullae or blebs. If there is some missing points in the medical history, intentionally or unintentionally given during the examinations for fitness to dive (FTD), it might not be possible to detect previous SP history by physical examinations and imaging.

## CASE

19 year-old student enrolled in a two years program to be able to get professional diver license, after getting medical certification for FTD. In the middle of his first year, he had a sharp pain on his left side of thorax while resting and he applied to emergency department since the pain persisted. The chest x-ray revealed pneumothorax in the left side and he was admitted to the hospital (Figure 1). CT scan of the chest confirmed the pneumothorax, but no bullae or blebs were detected (Figure 2).



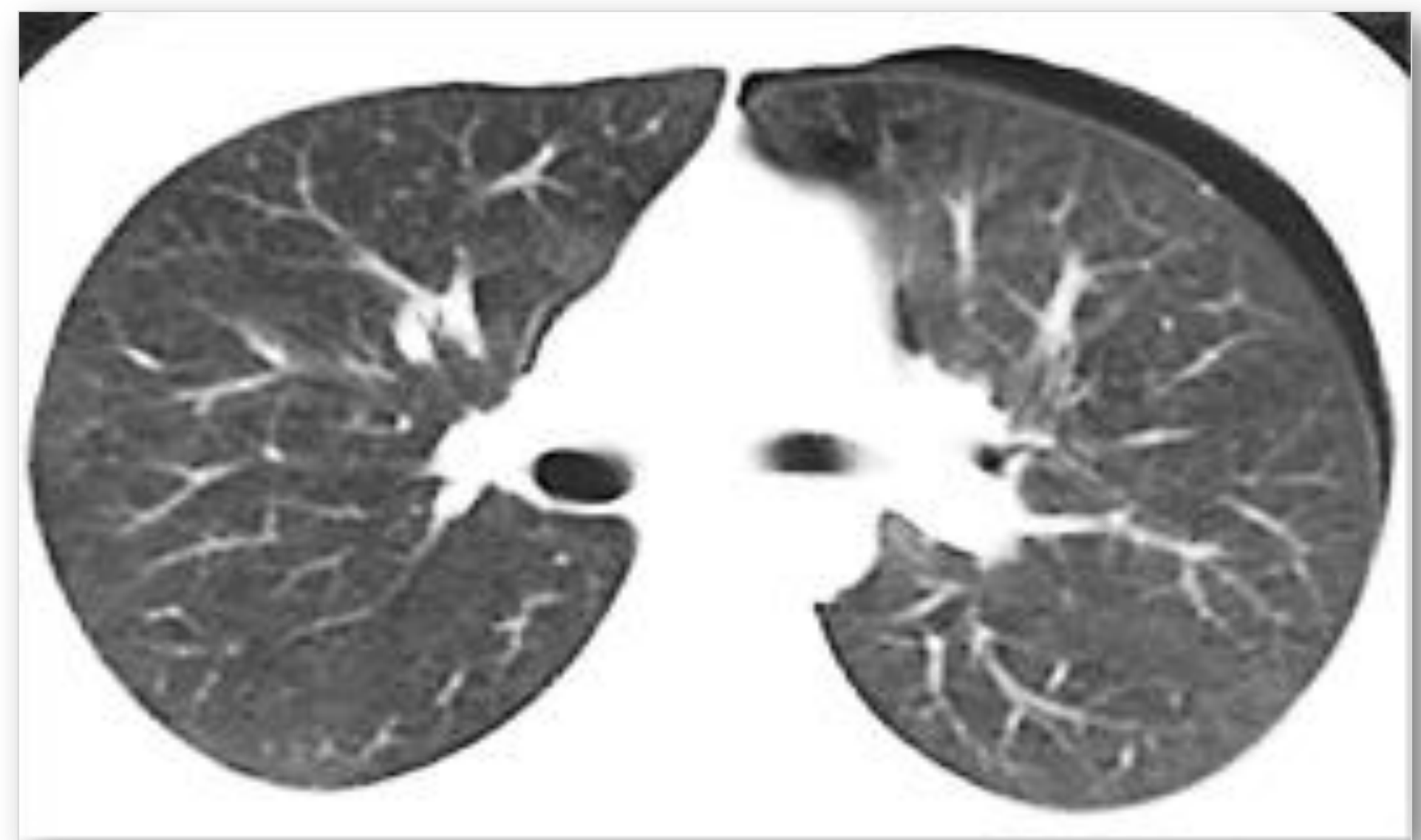
**Figure 1.** Pneumothorax was detected on the left side.



**Figure 4.** Pneumothorax resolved completely .

Videothoracoscopic wedge resection and pleural abrasion were applied to the apex of the left lung, to prevent recurrences. During the operation no abnormality differing from normal lung tissue was detected visually, and pathological examination revealed emphysematous changes.. The was no pneumothorax sign in the chest x-ray on the 4th day after the operation (Figure 4).

The patient was discharged on 8th day after the operation. There was no air trapping lesion in control CT scan (Figure 5). The patient was considered unfit to dive and he had to leave his program.



**Figure 2.** CT scan of the chest confirmed the pneumothorax, but no bullae or blebs were detected.



**Figure 5.** There was no air trapping lesion in control CT scan.

## DISCUSSION

History of SP is considered as contraindication for diving. Medical history has an important role in FTD exams, since an abnormality may not be detected during physical examination or screening methods, such as chest tomography after SP