

## Spot the trachea! A wide paratracheal air cyst of not easy definition

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**Summary.** We report a case of a 68-year-old woman with an occasional image of a wide paratracheal oval air cyst of not easy definition. Patient had never received a chest X-ray and she had never suffered from symptoms that needed to investigate the trachea or the neck. The diagnostic hypothesis was a wide tracheal diverticulum or a bronchogenic cyst. ([www.actabiomedica.it](http://www.actabiomedica.it))

**Key words:** paratracheal air cyst, tracheal diverticulum, bronchogenic cyst

In March 2016, a 68-year-old woman was presented to the Emergency Room of our University-Hospital in Parma (Italy) with progressive dyspnea, fever and mental status deterioration; her symptoms started one week previously. The brain computed tomography (CT) scan appeared to show no signs of trauma or other alterations. The arterial blood gas analysis showed a mild acute hypoxemic respiratory failure treated with only oxygen-therapy. The chest X-ray showed a lung parenchymal infiltrate in the lower left lobe, suspected for a community-acquired pneu-

monia (CAP). The patient was therefore transferred to the Respiratory Department and she received a chest CT scan.

The chest CT scan confirmed the CAP and highlighted an occasional image of a wide paratracheal oval air cyst with a coronal and a sagittal diameter of 3.9 and 3.5 centimeters, respectively. Figure 1 shown the chest X-ray and CT scan of the paratracheal air cyst. At the first evaluation in the higher scans of chest CT, it was difficult to identify the trachea from the cyst. The cyst was close to the inferior margin of right thy-

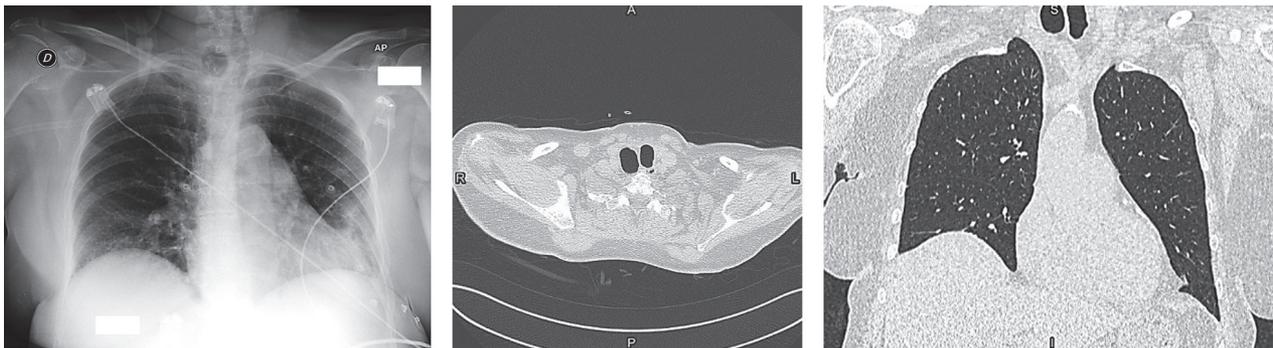


Figure 1.

roid lobe, and medially in close relation with the trachea; there was not clear evidence of communication between the cyst and the trachea.

The patient was a smoker of forty pack/year with a mute pathological anamnesis for pulmonary diseases; she did not have emphysema, pulmonary fibrosis or bronchiectasis. No cough, no phlegm were reported in anamnesis. She had never received a chest X-ray; she had never suffered from symptoms that needed to investigate the trachea or the neck. At the flexible bronchoscopy no tracheal alterations with no lesions or signs of discontinuity of the mucous membrane were found; the carina was normal with a normal bronchial ramification.

About considerations on diagnosis, our first hypothesis was for a wide tracheal diverticulum (1). Although in some cases, the passage of air may be very small to be difficult to recognize at the chest CT scan, in our finding a noticeable penduculus was completely missing in the whole of the wide cyst; this aspect was confirmed at bronchoscopy. Moreover, the form of the cyst is not similar to the elongated and protruding form of a tracheal diverticulum (1). Secondly, we hypothesized a bronchogenic cyst (2) that however are uncommon to find with a stable air content and typically have a fibrous capsula and contain mucous mate-

rial. In both hypothesis, however, the congenital nature of the cyst related to a tracheo-bronchial tree malformation may be the cause of our finding. Although these malformations are diagnosed in childhood (2) or may generate compression on close structures, otherwise they get infected or generate a fistula, surprisingly in this case however it has been an occasional image, completely asymptomatic.

## References

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Received: 15 July 2016

Accepted: 19 September 2016

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