

Case	(232) Pleural effusion in asymptomatic young adult
Authors	A. Nava Muñoz, A.m. Mañas Hernández, M.c. Arizaga Ramírez, A. Victoria Artalejo.
Centre	Hospital Clínico San Carlos.

CASE PRESENTATION

A 34-year-old man with no previous clinical history was admitted to this hospital due to low grade fever, myalgia and general discomfort. In the past two weeks, the patient related hacking cough, dyspnea and intermittent low chest pain. He didn't refer either tuberculosis contact, night sweats, weight loss, vomiting or diarrhea.

He had not travelled abroad recently. A thoracic plain x-ray film was performed (figure 1), appreciating right base lung opacity without mediastinal displacement, followed by a chest ultrasound (figures 2-3), which revealed right lung hypoechoic pleural effusion with internal echoes, highly suggestive of exudate, partial lung atelectasis, as well as pleural nodules.

After 3 days with antibiotic treatment and torpid evolution, a chest CT scan was obtained, followed up by a PET/CT (figure 4) that demonstrated FDG accumulation in pleural implants, along with subcarinal lymph node. The thoracoscopy and biopsy revealed unknown origin adenocarcinoma.

DISCUSSION

In our case, non-mediastinal displacement determined an ultrasound realization in the emergency room (ER), being essential in order to determine the proportion between pleural effusion and collapsed lung. It also allowed differentiation between transudate or exudate effusion, and the presence of pleural nodules and pleural thickening narrowed down the diagnostic possibilities to malignant diseases.

Thoracic ultrasound is a safe, effective and economical diagnostic imaging tool, classically used in the ER for safe thoracentesis guiding. However, nowadays it not only allows free or loculated pleural effusions distinction, but also further analysis of their intrinsic characteristics for an adequate differential diagnosis. Pleural thickening, pleural nodularity and diaphragmatic thickening are highly suggestive criteria of malignant disease.

CONCLUSION

We believe that thoracic ultrasound is a suitable tool to make a first approach in certain diseases, especially in young adults, where there should be a careful management of radiation doses.



Fig. 1. Chest plain x-ray film demonstrates inferior and middle right lobes opacity, with non mediastinal displacement

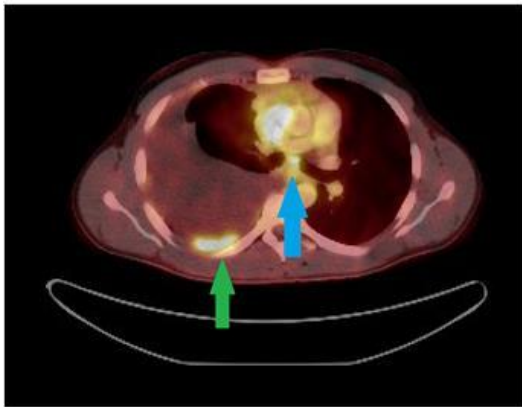
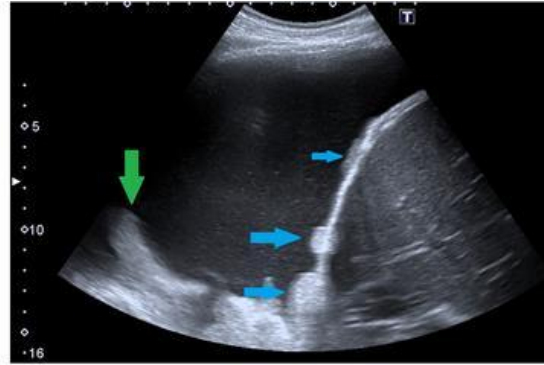
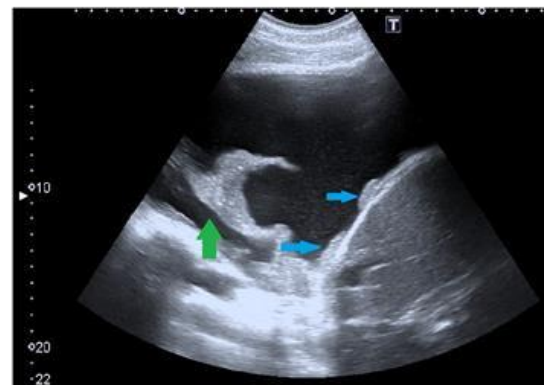


Fig. 4. PET/CT showing FDG accumulation in pleural implant (green arrow) and subcarinal lymph node (blue arrow)



Figs. 2-3. Chest ultrasound demonstrates pleural effusion with internal echoes, collapsed lung (green arrows) and pleural implants (blue arrows)



BIBLIOGRAPHY

Qureshi NR, Rahman NM, Gleeson FV. Thoracic ultrasound in the diagnosis of malignant pleural effusion. *Thorax*. 2009 Feb;64(2):139-43. doi: 10.1136/thx.2008.100545. Epub 2008 Oct 13.