Clinical summary

- Female 27 year-old presents with jaundice
- CT scan shows porta hepatis lesions and also intra-hepatic lesion with an intra-hepatic biliary duct dilatation
- A core biopsy of the liver lesion showed Hodgkin’s lymphoma
- The patient was referred for a staging FDG PET/CT scan
- Treatment was started with doxorubicin, bleomycin, vinblastine, dacarbazine (ABVD)
PET/CT findings

The PET/CT scan shows increased uptake in left axillary, mediastinal and intraabdominal adenopathy, and hepatic lesions.

Resolution of FDG uptake in liver lesions and adenopathy after 2 cycles of ABVD.
After 4 cycles of ABVD the patient developed cough and dyspnea on exertion. The PET/CT scan shows interval appearance of diffuse lung FDG uptake, associated with diffuse pulmonary opacities.
What is your impression of the lung findings?

A) Pneumocystis carinii pneumonia

B) Lymphoma

C) Fungal Infection

D) Bleomycin-induced Pneumonitis

E) Non-specific pulmonary inflammation
Answer: D. Bleomycin-induced Pneumonitis

- The patient had a negative bronchoalveolar lavage.
- Pulmonary function tests obtained showed moderate restriction and diffusion capacity was severely reduced.
- The patient became asymptomatic 4 weeks after last course of therapy.
- Resumed on 2 cycles of AVD chemotherapy.
At the end of AVD therapy, there is no residual FDG avid disease or uptake in lungs on CT.
Further examples of bleomycin-induced pneumonitis in patients with Hodgkin’s lymphoma treated with ABVD
PET/CT findings

The PET/CT scan shows mild FDG activity in the lung bases posteriorly associated with subpleural reticular changes on lung CT, consistent with bleomycin induced pneumonitis.

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PET/CT findings

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Teaching points

- FDG uptake in the lungs during ABVD chemotherapy may be due to Bleomycin related pneumonitis which is a potentially life threatening complication.

- Further workup including bronchoalveolar lavage to exclude active infections, and pulmonary function tests is required for diagnosis.


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