Prednisone

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Pulmonary histoplasmosis: case report

A 21-year-old man developed pulmonary histoplasmosis during treatment with prednisone.

The man, who had undergone allogenic haematopoietic stem cell transplant (HSCT) following the diagnosis of pre-B cell lymphoblastic leukaemia in 2011, presented in March 2014, for one year follow up examination. Prior to the presentation, in January 2014, he had developed non-bloody diarrhoea, which was successfully treated with prednisone 75mg therapy for two weeks. During the follow up visit in March 2014, laboratory tests revealed WBC count of 5.6 K/µL, lymphocyte count of 32.5%, neutrophil count of 51.8%, eosinophil count of 7% and monocyte count of 8%. Platelet count was 292 K/µL. CD4 cell count was noted to be 353 cells/µL and total T cells count was 680 cells/µL. The chest X-ray demonstrated a solitary right upper lobe nodule of 1.4cm. CT scan showed a 2.1cm lesion on the right upper lobe of the lung. This lesion was associated with ground glass opacity. A PET scan demonstrated a right upper lung nodule of 1.6cm with hyper-metabolic activity (4.4). The right hilum was noted to be associated with focal hyper-metabolism and mildly hyper-metabolic mediastinal nodes. Coronavirus was detected from the respiratory viral panel. A CT-guided biopsy of the lung nodule was carried out. The eosin and haematoxylin stains revealed areas of chronic inflammation and necrosis with mononuclear cells. Small and narrow-budding yeast cells were observed from a Grocott-Gomori's methenamine silver stain. This was followed by extraction of the DNA, its amplification and PCR product sequencing. This revealed existence of *Histoplasma capsulatum* [*duration of treatment to reaction onset not stated*].

The man's treatment was started with voriconazole. Subsequently, size of the lung nodule reduced to 1.4cm. Later, in April 2015 (one year post diagnosis of *histoplasma* infection), he was asymptomatic physically. Laboratory tests showed CD4 cell count of 564 cells/µL and total T cell count of 992 cells/µL. However, the chest CT scan demonstrated reduced size of the lung nodule. The longest dimension of the nodule was reported to be 1.4cm and it was not hyper-metabolic.

Author comment: "*Histoplasmosis causes a wide spectrum of clinical illness, including disseminated infection in the immunocompromised. . .A notable common feature of most cases including ours is the recent receipt of corticosteroids for GvHD treatment.*"

Natarajan M, et al. Pulmonary Histoplasma infection after allogeneic hematopoietic stem cell transplantation: Case report and review of the literature. Open Forum Infectious Diseases 4: ofx041, No. 2, Mar 2017 - USA 803285989