Abnormal FDG-PET Findings in Particulate-Induced Lung Disease

Editor – In a recent issue of *Clinical Medicine & Research*, Onitilo et al¹ report clinical, pathological and imaging findings in the case of a woman, aged 71 years, with life-long exposure to soot from an indoor wood cook stove. The findings of interest included hilar and mediastinal lymph node enlargement that was intensely hypermetabolic on ¹⁸F-fluorodeoxyglucose (FDG) positron emission tomography (PET) and histopathological findings of anthracotic pigment accumulation in lymphoid tissue that led to a diagnosis of anthracotic pneumoconiosis. The authors state it is difficult to understand the cause of increased FDG uptake on PET since the patient did not have malignancy or active inflammatory disease.

While specific mechanisms of increased FDG uptake in domestically acquired particulate lung disease have not been elucidated, increased FDG uptake in other pneumoconioses has been well established in previous reports. In a series of 6 patients with coal worker's pneumoconiosis who had a total of 19 nodules greater than 1 cm in diameter, 18 of the nodules were hypermetabolic and none was malignant, consistent with a coal dust induced response.² Other authors have reported positive findings on PET imaging in the setting of silica induced lung disease,³ including positive uptake in mediastinal lymph nodes consistent with silica induced inflammation.⁴ These reports support the conclusion by Onitilo et al¹ that their patient's history of life-long exposure to indoor wood smoke caused enlargement of mediastinal and

hilar lymph nodes and accounts for the associated increase in metabolic activity that was detected on FDG-PET imaging.

Keywords: Positron emission tomography (PET); pneumoconiosis; hypermetabolic; ¹⁸F-fluorodeoxyglucose (¹⁸F-FDG)

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Authors' Reply

Editor – We thank Dr. Kuschner for his informative and supportive letter. We also agree with his review of current literature related to FDG-PET avid pneumoconiosis.

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