



-PhD. F-18 FDG PET/CT Characterization of Talc Pleurodesis induced Pleural changes over time

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Abstract:

Purpose: The current study characterized pleural changes induced by talc pleurodesis (TP), based on serial positron emission tomography/computertomography (PET/CT) with F-18 fluorodeoxyglucose (FDG). **Materials and Methods:** A total of 8 cancer patients who had both TP and PET/CT and no evidence of active pleural involvement after TP were retrospectively evaluated. Maximum standard uptake values, maximum Hounsfield units (HU), and thickness were followed over time. **Results:** The 8 patients had 25 PET/CT scans performed in an average of 22 months after TP. An increased FDG uptake was associated with an increase in pleural thickness within 5 months after TP, and both parameters showed statistical significance as compared with findings before TP. After 5 months of TP, the standard uptake value appeared to persist or increase further, and the pleural thickening stabilized. The formation of calcification was a slow process and might lag behind the changes in FDG metabolism and pleural thickness. The HU did not change significantly once pleural calcification had been formed. **Conclusions:** Knowledge of aforementioned pleural changes may help differentiate TP induced pleural inflammation from pleural malignancy and to avoid false-positive interpretation of FDG PET/CT exams.

Keywords:

Talc pleurodesis, pleural changes, F-18 FDG PET/CT

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