

Serial CT and FDG-PET/CT findings of pleural change after talc pleurodesis in patients with history of malignancy

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PURPOSE: To characterize the serial CT and FDG-PET/CT findings of pleural change after talc pleurodesis in patients with history of underlying malignancy.

MATERIALS AND METHODS: We retrospectively evaluated the serial CT and FDG-PET/CT findings of six patients who underwent talc pleurodesis. They had no evidence of active pleural disease. The morphologic CT findings, maximum CT number (HU) and maximum standard uptake values (SUV) were evaluated. Additionally the changes of them on the follow up imaging were compared.

RESULTS: All patients had the FDG-PET/CT scans at least twice (range, 2 to 4) and the first studies were performed average 15 months after talc pleurodesis. All patients had histories of malignancies (lung cancer, 5 patients; cervical cancer, 1 patient). There were characteristic high-density pleural depositions (mean maximum CT number, 186; range, 126 to 266 HU) along with the pleural thickening (mean maximum thickness, 1.4 cm; range, 0.9 cm to 1.9 cm). Intense FDG uptake (mean maximum SUV, 14.45; range, 10.16 to 21.61) was demonstrated at the site of high-density pleural lesion at FDG-PET. The degree of contrast enhancement was various (range, 5 to 107 HU). The appearance of talc related pleural lesion was linear elongated (4 patients) or focal nodular shape (2 patients). They most commonly occurred in the posterior pleura and apical region. On the follow up study average 30 months (range, 3.7 to 40) later, the SUV appeared to persist or increase further. The thickness of the pleural lesion was stabilized and CT number of the lesion was slightly increased.

CONCLUSION: Talc pleurodesis can be shown by high-density linear or focal pleural thickening with increased FDG uptake that persists on serial follow up. Awareness of this characteristic pleural change at CT and FDG-PET/CT scan may help to distinguish this benign inflammatory process from pleural malignancy.