

Tumor Relapse After Thoracic Surgery?

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Early stage non–small-cell lung cancer treatment relies on radical surgery, which radically improves the prognosis. However, pulmonary resections lead to complications. Prolonged air leaks are one of the most frequent.¹ By the way, different techniques have been developed to prevent prolonged air leaks: fibrin glue, synthetic polymers, and bovine pericardium. FOREseal bioabsorbable sleeve for lung staple-line reinforcement is now widely used, following the results of a phase II multicentric study.²

Follow-up of operated early stages non–small-cell lung cancer patients is usually based on computed tomography (CT) scan images that might sometimes surprisingly evolve after surgery with a sleeve for staple-line reinforcement.

For example is a 72-year-old man followed in our department after left lower lobectomy associated with lymphadenectomy for a pT2aN1M0 squamous cell carcinoma. The follow-up CT performed after adjuvant carboplatin and paclitaxel based chemotherapy was negative. However, 4 years after diagnosis, a left infra-hilar lesion appeared close to the resected area (Fig. 1). A positron emission tomography CT was performed, showing a hypermetabolism of this lesion (SUV 3.5 g/ml) (Fig. 2). Fibroscopy and cytology were negative. Transparietal CT guided biopsies were performed. Pathology showed collagenic tissue without tumor cells. This patient is still alive and disease free 6 years after diagnosis.

We already know that air leaks after thoracic surgery have a major impact on the morbidity, duration of hospitalization, and costs and that the use of sealant for pneumonectomies or lobectomies is efficient to avoid suture dehiscence. Therefore, prophylactic techniques for preventing prolonged air leaks are widely used in thoracic surgery. The use of staple-line reinforcement significantly decreases the leak volume (38.5 versus 59.9 ml, $p = 0.041$) and the duration of hospitalization (33 versus 63 hours, $p = 0.013$) after lobectomy.³

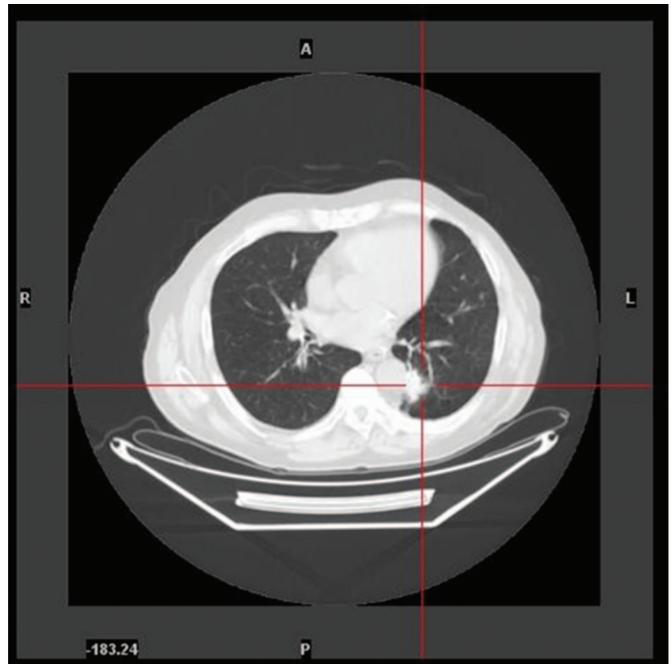


FIGURE 1. Computed tomography scan showed a left infra-hilar opacity next to the surgical site.

Few similar examples of tumor relapse suspicion have been published either with the same reinforcement sleeve² or with other sleeves such as bovine pericardium⁴ or synthetic sealant.⁵ Furthermore, these pseudo-tumors may occur early and several years after surgery with staple-line reinforcement. This case points a potential cause of mistake for clinicians. Staple-line reinforcement may mimic tumor relapse. Therefore, oncologists must be aware of

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Disclosure: The authors declare no conflict of interest.

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DOI: 10.1097/JTO.0000000000000333

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ISSN: 1556-0864/15/1002-0397

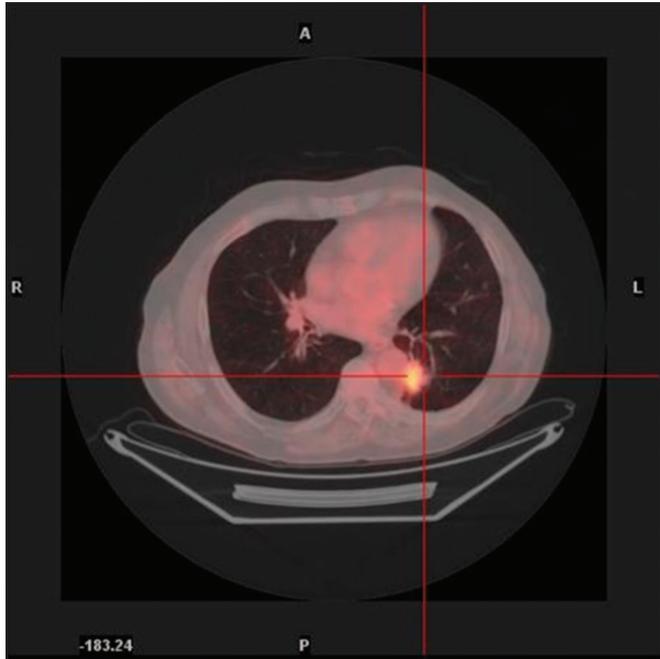


FIGURE 2. Positron emission tomography computed tomography showed a hypermetabolism of the left hilar opacity (SUV 3 g/ml).

the existence of sealant complications mimicking cancer relapse. A multidisciplinary team discussion together with a pathological examination is obviously always required to exclude a tumor relapse. However, knowing this rare outcome may speed up the work up and reassure patients and physicians when following-up with lung cancer patients treated with a bronchial reinforcement after thoracic surgery. This may also avoid morbidity and over costs of unuseful exams or surgery.

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