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CLINICAL IMAGE

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Acute pneumonitis caused by oral intake of incense

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Key message

Incense is typically burned for use, with bronchitis and pneumonia reported as potential side effects. Physicians should be cautious as inappropriate oral ingestion of incense can lead to acute pneumonitis.

KEYWORDS
acute pneumonitis, incense, oral intake

CLINICAL IMAGE

A 63-year-old, ex-smoking, Japanese man was admitted to our hospital with a dry cough and dyspnea. He had a history of lung cancer (cT3N2M0, Stage 3A) and had undergone chemotherapy until six months prior, achieving remission since its conclusion. Regular monitoring was conducted through chest computed tomography scans and measurement of tumor markers and Krebs von den Lungen-6 (KL-6) levels. KL-6 levels were routinely measured to monitor for late-onset drug-induced pulmonary toxicity following chemotherapy. He had applied incense (Figure 1) to his skin for 10 years, and had started licking it for the past 3 months. Chest high-resolution computed tomography (HRCT) revealed diffuse ground-glass opacities (Figure 2). Tests for multiple viruses and bacteria (BioFire® FilmArray Respiratory Panel 2.1), serum antibodies against *Trichosporon asahii*, and bird-specific IgG were all negative. The serum KL-6 level (a biomarker of lung damage) was increased (1909 U/mL). Bronchoalveolar lavage fluid had increased lymphocytes (79%) with a low CD4/CD8 ratio (0.6). The drug-induced lymphocyte stimulation test for the incense was positive. The symptoms and chest HRCT findings spontaneously improved after discontinuing the oral intake of the incense (Figures 3 and 4); therefore, acute pneumonitis caused by the oral intake of incense was diagnosed. Burning incense can increase the risk of bronchitis and pneumonia due to alveolar pneumocyte degeneration and neutrophil infiltration (1,2). Although

FIGURE 1 The incense that the patient used.

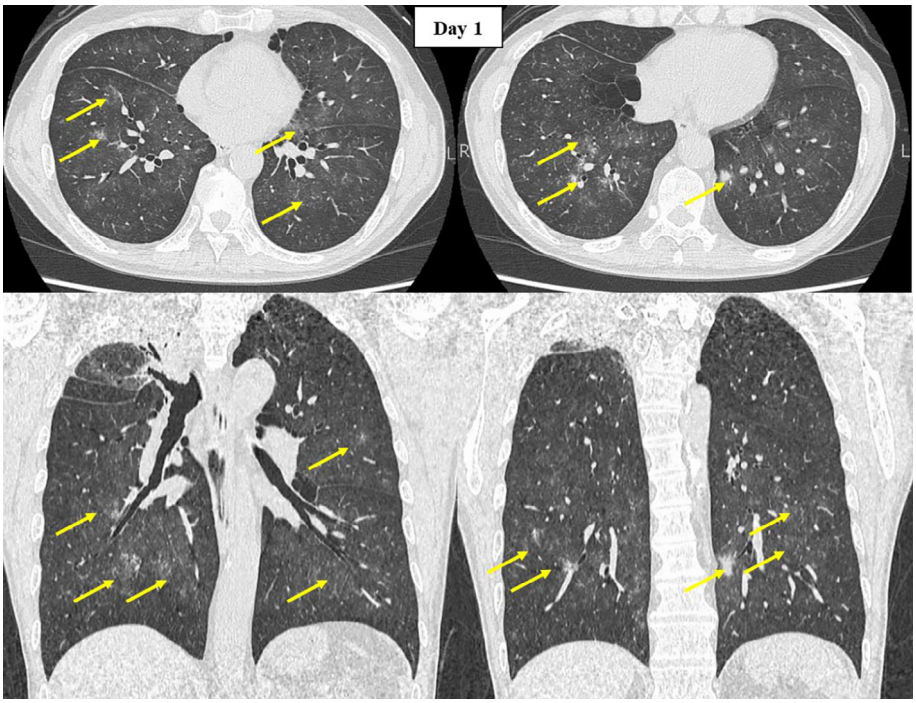

FIGURE 2 Chest high-resolution computed tomography on admission shows bilateral diffuse ground-glass attenuations (arrows) in the bilateral lung lobes.

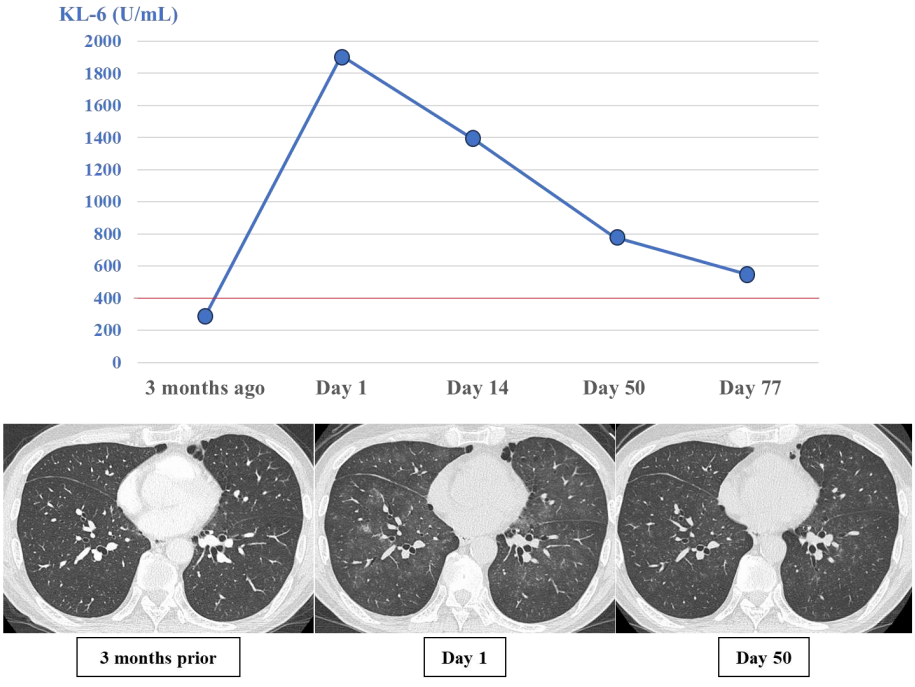

FIGURE 3 Chest high-resolution computed tomography (HRCT) conducted 3 months prior to initiating oral intake of incense showed no abnormalities, and serum KL-6 levels were within the normal range. On the day of admission (Day 1), chest HRCT exhibited bilateral ground-glass attenuation, and the serum KL-6 level had risen to 1909 U/mL. Chest HRCT taken 50 days after ceasing the incense revealed the resolution of these bilateral ground-glass attenuations. Additionally, serum KL-6 levels began to decline following the cessation of oral incense intake.

the chemical composition of the incense used is unknown, and the incense itself was not burned, the patient may inhale it when applying and licking the powder, given its strong smell, which possibly led to pneumonia development. This is the first report of pneumonitis caused by the oral intake of incense.

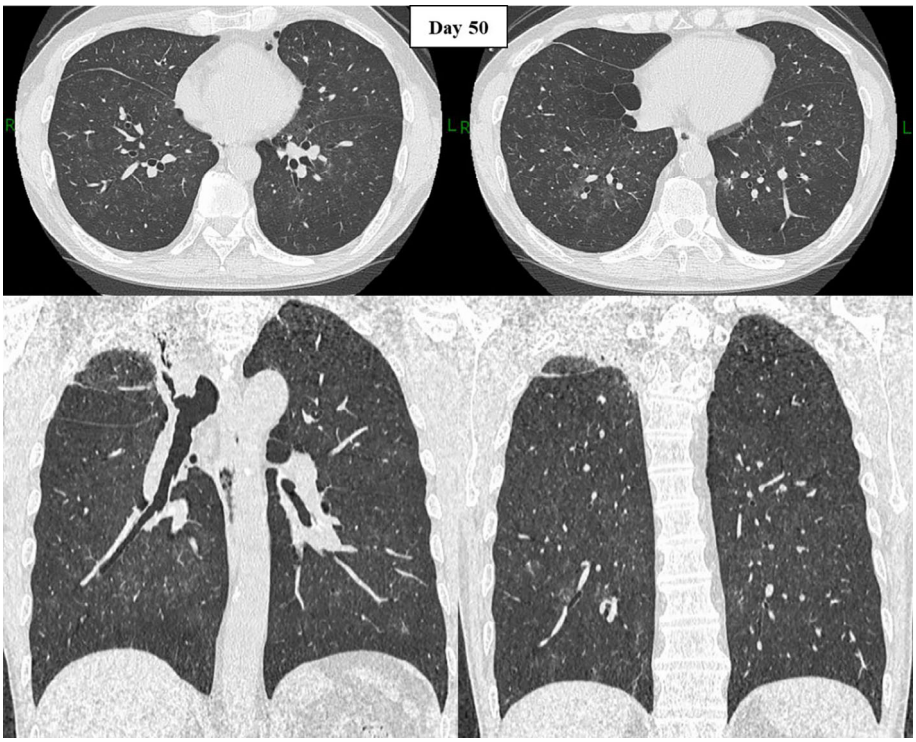

FIGURE 4 Chest high-resolution computed tomography taken 50 days after ceasing oral intake of the incense showed the resolution of the bilateral ground-glass attenuations.

AUTHOR CONTRIBUTIONS

Kei Yamasaki was responsible for drafting the work, the conception and design of the work, as well as the acquisition, analysis, and interpretation of the data for the work. Saki Shigemi was responsible for revising the manuscript critically for important intellectual content. Yosuke Chiba was responsible for revising the manuscript critically for important intellectual content. Takako Kawaguchi was responsible for revising the manuscript critically for important intellectual content. Hiroki Dosaka was responsible for revising the manuscript critically for important intellectual content. Yutaka Ishiguro was responsible for revising the manuscript critically for important intellectual content. Kazuhiro Yatera was responsible for the final approval of the manuscript version to be published.

CONFLICT OF INTEREST STATEMENT

None declared.

DATA AVAILABILITY STATEMENT

Data sharing not applicable—no new data generated.

ETHICS STATEMENT

The authors declare that appropriate written informed consent was obtained from the patient for the publication of this manuscript and accompanying images.

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