

Airway obstruction due to mochi (sticky rice cake) retrieved with a cryoprobe

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Key message

Cryoprobes represent an option for bronchial foreign body removal in cases of bronchial obstruction due to viscous substances such as mochi at body temperature.

KEYWORDS

airway obstruction, cryoprobe, foreign body aspiration, mochi, sticky rice cake

CLINICAL IMAGE

A healthy 80-year-old man started choking while eating soup with mochi, resulting in cardiopulmonary arrest. He was intubated on arrival at our hospital, but tidal volume was deficient, at 200 mL. Computed tomography revealed a mass in the right middle bronchial trunk (Figure 1), which was not able to be retrieved by bronchoscopic aspiration. Cryoprobe freezing was performed for 10 s, then the mass was easily removed (Figure 2). Tidal volume improved, but



FIGURE 1 Computed tomography shows findings suggestive of a food mass in the right middle bronchial trunk (red arrow).

the neurological prognosis was poor due to hypoxic encephalopathy, resulting in transfer to palliative care.

Mochi is a traditional Japanese food commonly eaten in New Year celebrations. This food made from steamed rice is sticky and elastic. As the temperature of the steamed mochi in the mouth and throat decreases closer to body temperature after eating, the viscosity of the mochi also increases,¹ making removal more difficult. With cryoprobe removal, the probe contacts and rapidly cools the target, allowing better handling and facilitating removal of the foreign body.² Removal with biopsy forceps or baskets can scatter small fragments into the bronchus and is not recommended for fragile materials.² Cryoprobes should be considered as an option for removing bronchial foreign bodies showing viscous properties.

AUTHOR CONTRIBUTIONS

Masanori Kawataki: Writing original draft and writing-review. **Momoko Hayase:** Conceptualization. **Masamitsu Hamakawa:** Supervision and conceptualization. **Tadashi Ishida:** Writing-review and editing.

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CONFLICT OF INTEREST STATEMENT

None declared.

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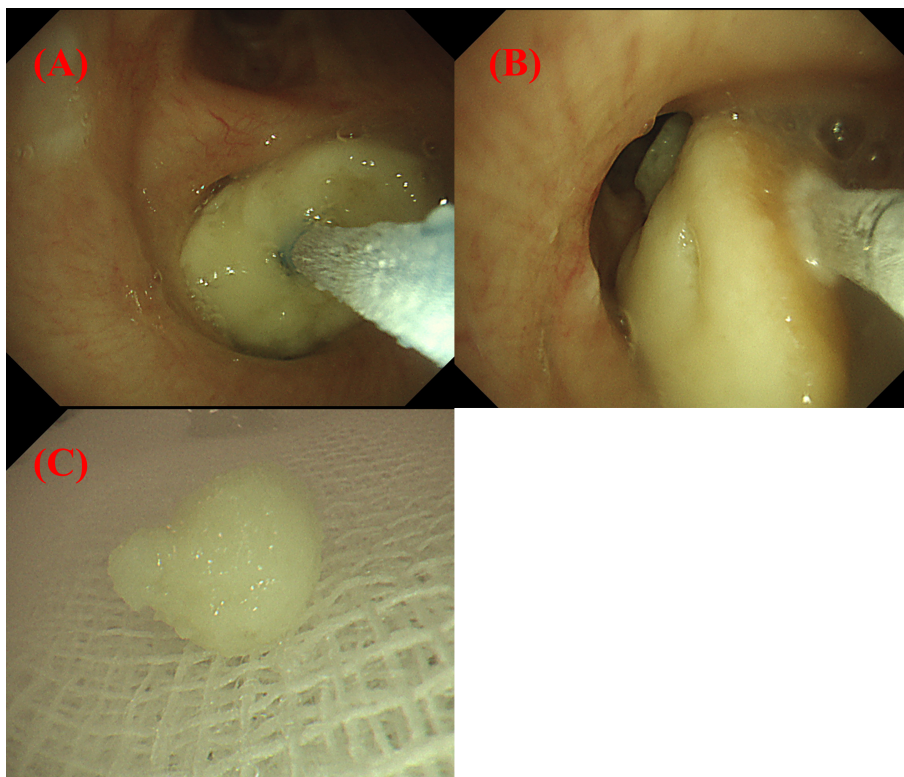


FIGURE 2 (A) The cryoprobe is placed in contact with the mochi and allows firm adhesion by chilling. (B) After cooling for 10 s, the cryoprobe and mochi are withdrawn as one piece with the bronchoscope. (C) The mochi is removed from the cryoprobe and collected with gauze.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The authors declare that appropriate written informed consent was obtained for the publication of this manuscript and accompanying images. This study was approved by the institutional review board.

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