Contents lists available at ScienceDirect

Respiratory Investigation

journal homepage: www.elsevier.com/locate/resinv

Case report

Two cases of pseudo-achalasia with lung cancer: Case report and short literature review

Taizou Hirano, , M.D., Ph.D.[a,*], *Eisaku Miyauchi*[a], *Akira Inoue*[b], *Ryotaro Igusa*[c], *Shigeki Chiba*[a], *Kazuhiro Sakamoto*[d], *Hisatoshi Sugiura*[a], *Toshiaki Kikuchi*[e], *Masakazu Ichinose*[a]

[a]*Department of Respiratory Medicine, Tohoku University Graduate School of Medicine, 1-1 Seiryo-machi, Aoba-ku, Sendai, Miyagi 980-8574, Japan*

[b]*Department of Palliative Medicine, Tohoku University Graduate School of Medicine, 1-1 Seiryo-machi, Aoba-ku, Sendai, Miyagi 980-8574, Japan*

[c]*Department of Respiratory Medicine, Oosaki Citizen Hospital, 3-8-1 Furukawahonami Oosaki, Miyagi 989-6174, Japan*

[d]*Department of Pathology Medicine, Oosaki Citizen Hospital, 3-8-1 Furukawahonami Oosaki, Miyagi 989-6174, Japan*

[e]*Division of Respiratory and Infection Medicine, Graduate School of Medical and Dental Sciences, Niigata University, Niigata, Japan*

ARTICLE INFO

Article history:
Received 28 January 2016
Received in revised form
11 April 2016
Accepted 21 April 2016

Keywords:
Lung cancer
Pseudo-achalasia
Secondary achalasia
Paraneoplastic neurological syndromes

ABSTRACT

Pseudo-achalasia with lung cancer is a rare complication. We present 2 cases of pseudo-achalasia with lung cancer and summarize previous reports. The previous reports suggested that lung cancer can be complicated with pseudo-achalasia caused by paraneoplastic neurological syndromes rather than direct invasion of the tumor cells to the lower esophageal sphincter, irrespective of the histology of the lung cancer; this can strongly influence the performance status. Treatment for pseudo-achalasia improves not only the symptoms, but also the performance status. Therefore, pseudo-achalasia should be considered when lung cancer patients present with dysphagia without other known causes.

1. Introduction

Achalasia is primarily an esophageal motility disorder characterized by the absence of esophageal peristalsis and impaired relaxation of the lower esophageal sphincter (LES) [1]. Pseudo-achalasia, however, is defined as achalasia caused by a secondary etiology. As only a few cases of pseudo-achalasia caused by lung cancer have been reported, it is

*Corresponding author. Tel.: +81 22 717 8539; fax: +81 22 717 8549.
E-mail addresses: taizou2001@gmail.com (T. Hirano), miyauchi@rm.med.tohoku.ac.jp (E. Miyauchi), akinoue@idac.tohoku.ac.jp (A. Inoue), ryo-igusa@h-osaki.jp (R. Igusa), shi-chiba@rm.med.tohoku.ac.jp (S. Chiba), ksakamoto-och@h-osaki.jp (K. Sakamoto), sugiura@rm.med.tohoku.ac.jp (H. Sugiura), kikuchi@med.niigata-u.ac.jp (T. Kikuchi), ichinose@rm.med.tohoku.ac.jp (M. Ichinose).

http://dx.doi.org/10.1016/j.resinv.2016.04.006
2212-5345/

Please cite this article as: Hirano T, et al. Two cases of pseudo-achalasia with lung cancer: Case report and short literature review. Respiratory Investigation (2016), http://dx.doi.org/10.1016/j.resinv.2016.04.006

considered a rare complication and its clinical features are poorly understood. Herein, we report 2 cases of pseudo-achalasia complicated by lung cancer and provide a summary of previous case reports.

2. Case presentation

2.1. *Case 1*

A 65-year-old Japanese woman, who had been diagnosed with squamous cell carcinoma of the lung (cT4N0M0, stage IIIa) by computed tomography (CT) guided-needle biopsy 1.5 years previously, presented with a 1-month history of dysphasia, nausea, vomiting, and weight loss (~10 kg). She had a history of social smoking (30 packs/year). On admission, the patient appeared unwell and thin, and her performance status (PS) was 4. Her oxygen saturation was 93% on room air. On physical examination, the left back lung sound was decreased. A chest radiograph showed tumor shadows in the left lower lobe (Fig. 1A). Gastrointestinal fiberscopy and CT revealed stenosis of the LES without external direct compression by the lung cancer, and dilation of the upper part (Figs. 1B–D and 2A). We next performed upper gastrointestinal fluoroscopy with barium to evaluate potential esophageal motility disorders. At the time of swallowing a sip of barium, examination of the patient revealed an obstruction in the lower esophagus. One hour later, it demonstrated retention of barium in the esophagus and dilation of the esophagus (Fig. 2B). Therefore, pseudo-achalasia (grade 1, spindle-type) complicated with lung cancer was diagnosed and gastrostomy was performed as palliative therapy. Following the procedure, the patient's PS improved from 4 to 2 and she was able to walk. Therefore, she was discharged. However, the patient died on the 67th day of disease. At autopsy, the histology of the lower esophagus did not demonstrate invasion of cancer cells to the esophageal myenteric plexus (Fig. 2C, D).

2.2. *Case 2*

A 66-year-old Japanese man presented with a 2-month history of worsening dysphasia, cough, and body weight loss (~6 kg). His medical history included prostate adenocarcinoma that had been treated with radical prostatectomy at the age of 60 years; his prostate cancer was in remission. The patient had a history of social smoking (40 packs/year). On admission, his PS was 3 and his oxygen saturation was 92% on room air. On physical examination, bilateral back lung sounds were decreased. Most of the laboratory findings were within the normal range. A chest radiograph showed bilateral pleural effusion, and chest CT scans showed nodular

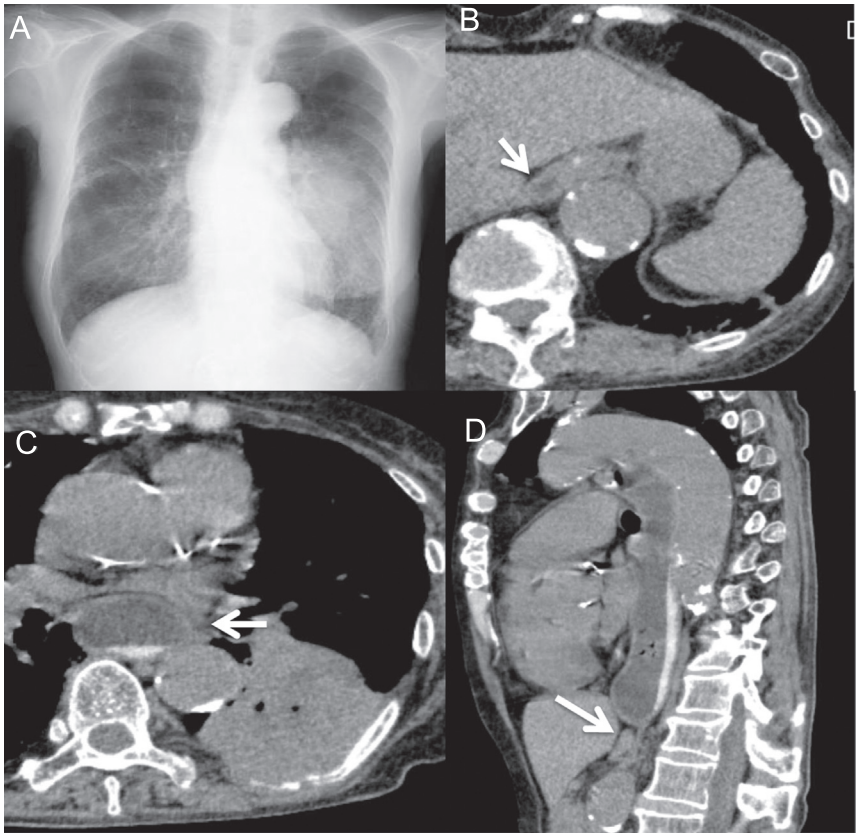

Fig. 1 – Chest radiography (A) and computed tomography (CT) (B and C, coronal; D, sagittal) images are shown. Arrow on CT indicates stenosis of the lower esophageal sphincter (LES) and dilation of the upper esophageal sphincter; there was no direct compression of the lesion.

Please cite this article as: Hirano T, et al. Two cases of pseudo-achalasia with lung cancer: Case report and short literature review. Respiratory Investigation (2016), http://dx.doi.org/10.1016/j.resinv.2016.04.006