Received: 25 August 2022 | Revised: 7 December 2022 | Accepted: 13 December 2022

DOI: 10.1002/ccr3.6826

CASE IMAGE

Clinical Case Reports Open Access WILEY

Primary pleural lymphoma accompanied by silicosis

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Abstract

Reports of malignant lymphoma accompanied by silicosis are limited. A 93-year-old man with silicosis presented with right massive pleural effusions and was diagnosed with primary pleural lymphoma. Since there was no evidence of chronic pyothorax or Epstein–Barr virus infection, it may be due to silicosis-associated chronic inflammation.

KEYWORDS

lymphoma, pleural effusions, silicosis, thoracoscopy

1 | INTRODUCTION

Although lung cancer is the most common malignancy associated with silicosis, there are few reports of malignant lymphoma accompanied by silicosis.[1] To the best of our knowledge, there is only one case report of primary pleural lymphoma associated with silicosis.[2] We report a case of pleural lymphoma in a

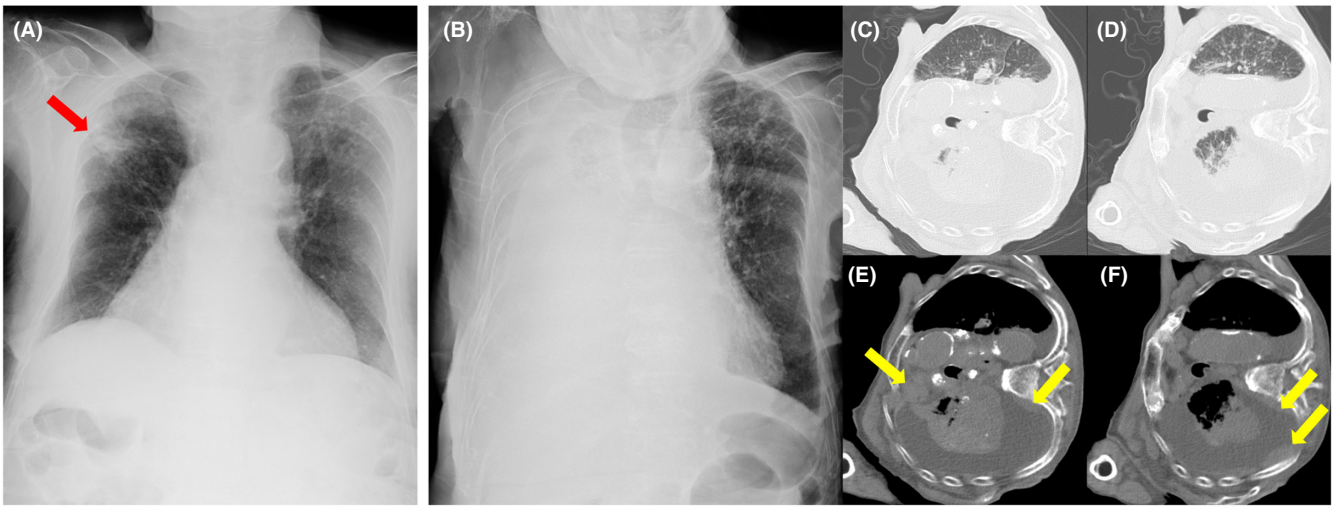

FIGURE 1 (A) Chest radiograph obtained 5 years before presentation shows a large fibrotic mass in the right upper zone (red arrowhead) and bilateral small nodules with upper-zone predominance. Pleural effusion is not seen. (B) Chest radiograph at presentation reveals right massive pleural effusions. (C–F) Chest computed tomography reveals multiple pleural tumors (yellow arrowheads) and bilateral pleural effusions with right predominance, in addition to small nodules in the left upper pulmonary lobe and enlarged hilar and mediastinal lymph nodes with calcification—typical findings in silicosis. Images (C) and (D) show the lung window, and images (E) and (F) show the plain mediastinal window.

patient with silicosis presented with a massive pleural effusion.

2 | CASE PRESENTATION

A 93-year-old man with a history of silicosis was referred for progressive dyspnea. Chest imaging revealed right massive pleural effusions and multiple pleural tumors, in addition to small silicotic nodules and enlarged hilar and mediastinal lymph nodes with calcification (Figure 1). Plasma levels of soluble interleukin-2 receptors were elevated (2770 U/ml), and malignant cells were observed in the pleural fluid. Thoracoscopy performed under local anesthesia revealed multiple protruding papillary lesions in the pleura, and diffuse large B-cell lymphoma was confirmed pathologically (Figures 2 and 3). Brain and abdominal to pelvic computed tomography showed no tumor lesions, and the patient was diagnosed with primary pleural lymphoma. The patient died 16 days after palliative treatment owing to poor general condition.

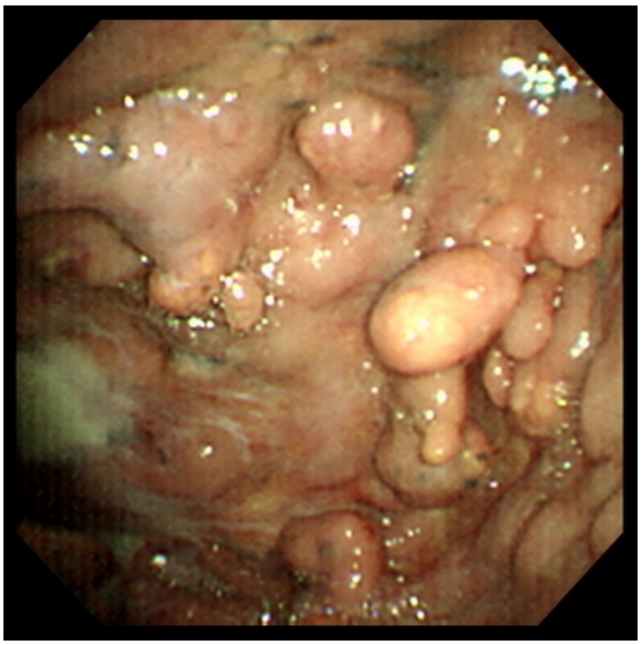

FIGURE 2 Thoracoscopy shows multiple protruding papillary lesions in the parietal pleura. White-colored plaque is also seen.

3 | DISCUSSION AND CONCLUSION

Complications associated with silicosis include lung cancer and tuberculosis; however, the association of silicosis with malignant lymphoma is unclear. Primary pleural lymphoma is known to be associated with chronic tuberculous pyothorax, Epstein–Barr virus (EBV) infection, and autoimmune diseases.[3] In this case, chronic pyothorax was not observed, and EBV was not detected on pathological examination; therefore, we considered the disease onset may have been due to chronic inflammation by silicosis. Since silicosis is rarely accompanied by pleural effusions,[4] when pleural effusions are found in patients with silicosis, lymphoma should be considered, in addition to lung cancer and tuberculosis.

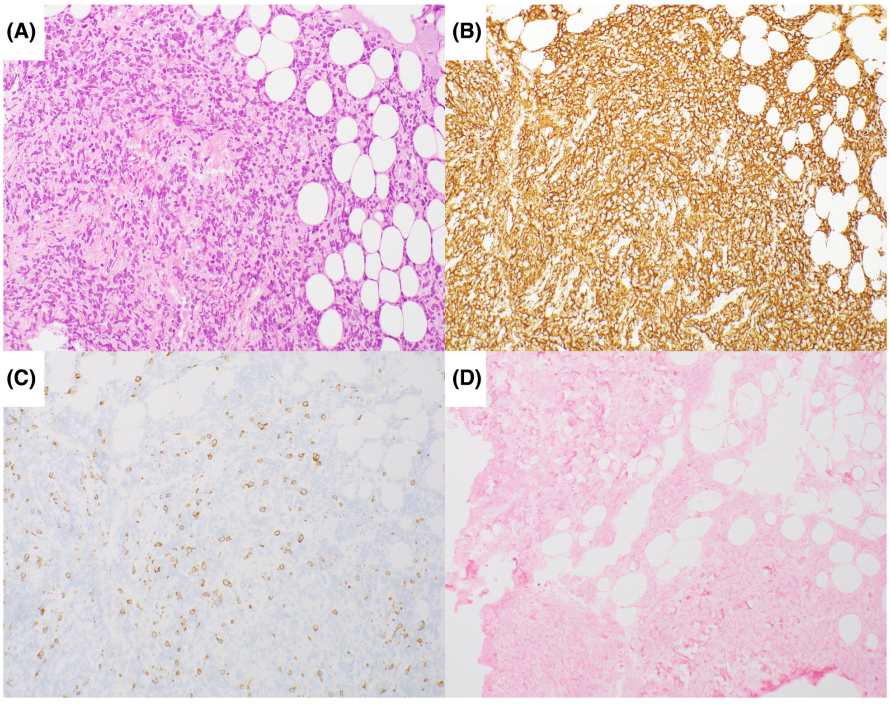

FIGURE 3 (A) Pleural biopsy reveals lymphoma cells on hematoxylin and eosin stain (×20). (B) Immunohistological examination reveals lymphoma cells positive for CD20, (C) negative for CD3, and (D) negative for Epstain-Barr virus-encoded RNA. Thus, the patient is diagnosed with diffuse large B-cell lymphoma.

AUTHOR CONTRIBUTIONS

Y.M. wrote the initial draft of the manuscript. A.O. and K.I. were responsible for the drafting and image modification. A.O. performed the thoracoscopy. All authors read and approved the final manuscript.

ACKNOWLEDGMENT

None.

FUNDING INFORMATION

This research was not supported by any specific grant from any funding agency in the public, commercial, or nonprofit sectors. Therefore, no funding body was not involved in the design of the study, the collection, analysis, and interpretation of the data, the writing of the manuscript, or the decision to submit the manuscript for publication.

CONFLICT OF INTEREST

None.

DATA AVAILABILITY STATEMENT

No datasets were generated or analyzed during this case report.

CONSENT

The patient has passed away. Thus, written informed consent to publish this report was obtained from the patient's relatives before the submission process.

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How to cite this article: Matano Y, Okazaki A, Iwasaki K. Primary pleural lymphoma accompanied by silicosis. *Clin Case Rep*. 2023;11:e06826. doi:10.1002/ccr3.6826