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CLINICAL IMAGE

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Primary pulmonary lymphoma diagnosed by ultrasound-guided transthoracic needle biopsy

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Key message

Ultrasound-guided transthoracic needle biopsy is a relatively safe procedure diagnosing subpleural pulmonary mass and has high sensitivity in the diagnosis of lung cancer. However, the usefulness in other rare malignancies is unknown. This case shows the effectiveness in diagnosing not only lung cancer but also rare malignancies including primary pulmonary lymphoma.

KEYWORDS

primary pulmonary lymphoma, transthoracic needle biopsy, ultrasonography

CLINICAL IMAGE

An 82-year-old male was admitted to our hospital for abnormal shadows detected in his chest x-ray (Figure 1A). The chest computed tomography (CT) showed a huge mass in the right upper lobe (Figure 1B) and was further confirmed by positron emission tomography-CT (Figure 1C). Therefore, he underwent ultrasound-guided transthoracic needle biopsy (US-TTNB) (Figure 2) using 19G and 17G needles, as lung cancer was suspected. The biopsied specimen was positive for CD-20, CD-79a, and Ki-67 (Figure 3). Finally, he was diagnosed with primary pulmonary diffuse large B cell lymphoma. One of the standard procedures to diagnose pulmonary masses or nodules is bronchoscopy. However, it is reported that the frequency of complications and the mortality rate were very high in patients over 80 years old because of using sedatives and the bronchoscope physically narrows the trachea relatively.[1] US-TTBN for pulmonary mass contacting pleura is relatively safe and can be performed without using sedatives.[2] To our best knowledge, very few published reports are available describing primary pulmonary lymphoma diagnosed by US-TTNB. This case illustrates that US-TTBN is effective in diagnosing not only lung cancer but also other rare malignancy including primary pulmonary lymphoma relatively safely in elderly patients.

AUTHOR CONTRIBUTIONS

Yasuhito Sekimoto, Mitsuaki Sekiya, Makiko Kohmaru, Tomoko Okuma and Manabu Tajima were the attending doctors who treated the patient on admission. Hideaki Sato diagnosed the patient pathologically. Yasuhito Sekimoto, Mitsuaki Sekiya and Kazuhisa Takahashi drafted the manuscript. Yasuhito Sekimoto submitted the final manuscript. All authors read and approved the final manuscript.

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CONFLICT OF INTEREST STATEMENT

Kazuhisa Takahashi is an Editorial Board member of Respirology Case Reports and a co-author of

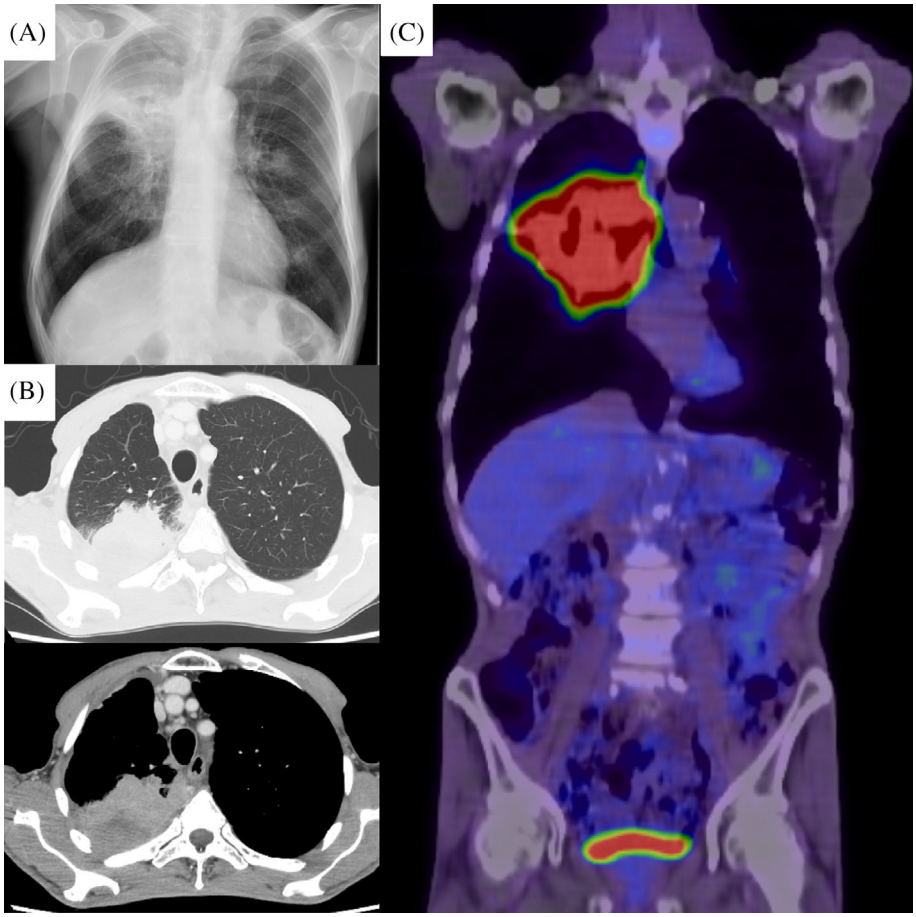

FIGURE 1 (A) Shows the chest x-ray on admission. (B) and (C) Show the computed tomography image of the lung on admission in enhance contrasted and positron emission tomography CT.

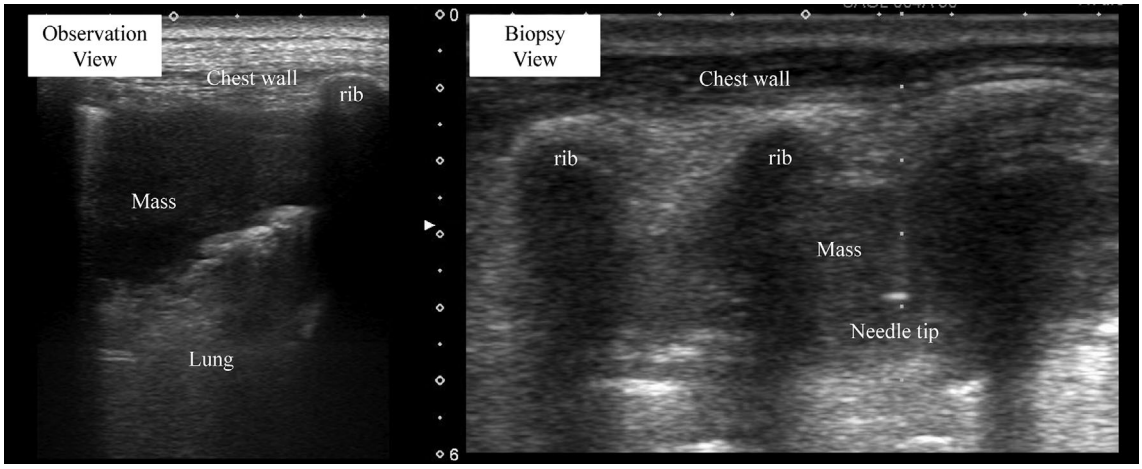

FIGURE 2 Shows the ultrasonography image of the ultrasound-guided transthoracic needle biopsy.

this article. They were excluded from all editorial decision-making related to the acceptance of this article for publication. The other authors have nothing to declare.

DATA AVAILABILITY STATEMENT

Research data are not shared.

ETHICS STATEMENT

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

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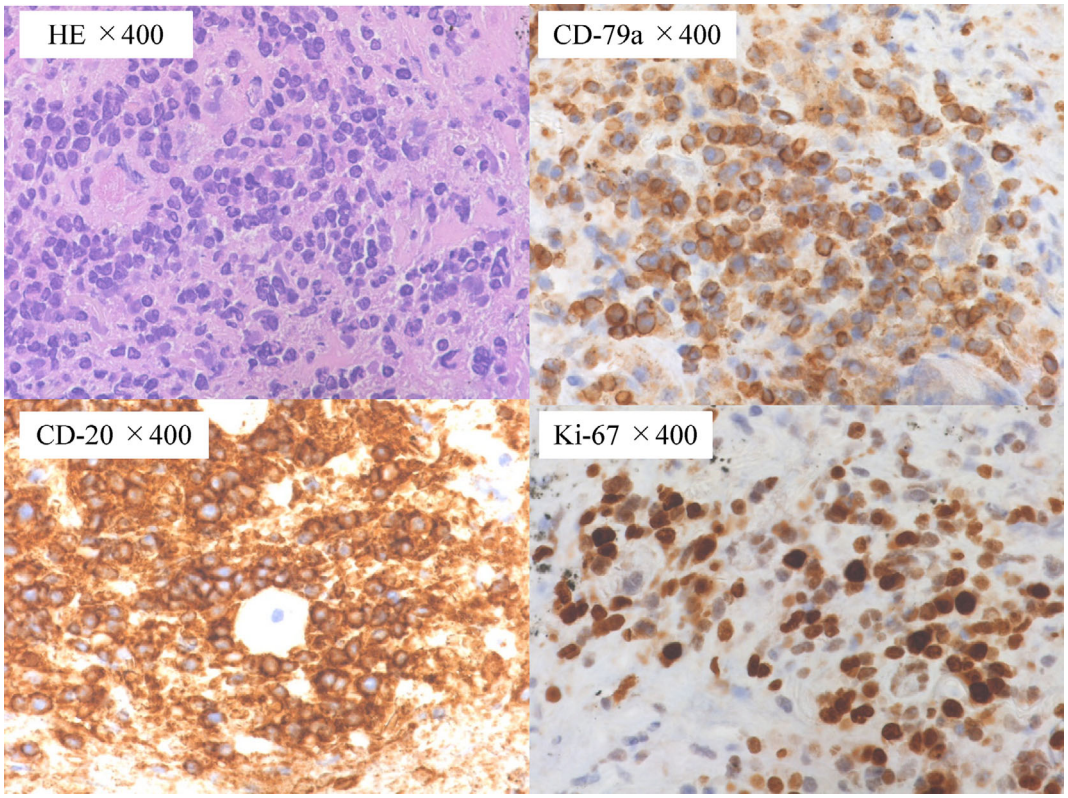

FIGURE 3 Shows biopsied specimen.

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