

Case Report

Hemorrhage after CT-guided percutaneous needle biopsy: a case report

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Abstract: Hemorrhage is one of the common complications of CT-guided percutaneous needle biopsy. We present a case of a young woman with an incidental lung mass at the right lower lobe. The woman was observed of severe intrathoracic hemorrhage after CT-guided biopsy. She was finally diagnosed as von willebrand disease, a rare hereditary hemorrhagic disease, and the lung mass was diagnosed as intrapulmonary solitary fibrous tumor, another rare mesenchymal neoplasm with very few references in the literature.

Keywords: Case report, solitary fibrous tumor, biopsy, hemorrhage

Introduction

Hemorrhage is one of the common complications of CT-guided percutaneous needle biopsy. We present a case of a young woman with an incidental lung mass at the right lower lobe. She developed serious intrathoracic hemorrhage after CT-guided biopsy. She was finally diagnosed as von willebrand disease, a rare hereditary hemorrhagic disease, and the lung mass was diagnosed as intrapulmonary solitary fibrous tumor, another rare mesenchymal neoplasm that very few references can be found in the literature.

Case report

A 36-year-old female was admitted to our hospital. CT scan showed a solitary mass at the right lower lobe (**Figure 1A** and **1B**). There was no history of fever, cough, haemoptysis, chest pain, et cetera. No significant laboratory abnormalities were found. She had digestive tract bleeding three years ago, but there wasn't any bleeding tendency currently.

We arranged CT-guided percutaneous needle biopsy for her. After biopsy, she claimed aggravated pain at the puncture point. New CT scan showed moderate pleural effusion of the right chest (**Figure 1C**), and her hemoglobin level decreased from 14 to 10 g/dl. As considering

she had acute intrathoracic hemorrhage, which could not be purely caused by the puncture, we asked her about medical history again. At that time, she confessed that she had concealed the medical history of hysterectomy and severe bleeding after hysteroscopy. Based on her claim, we emphatically analyzed haemostatic and coagulative factors, finally diagnosed her as with von willebrand disease, a hereditary hemorrhagic disease.

After sufficient fresh-frozen plasma therapy, the patient's intrathoracic hemorrhage was under control. Pathological and immunohistochemistry study showed CD34 (+), Bcl-2 (+), STAT6 (+), Ki-67 (+) < 5% (**Figure 1D**), which revealed the mass was a solitary fibrous tumor, a rare mesenchymal neoplasm. Based on above observations, we suggested her monitor the size of the tumor regularly.

Discussion

The incidence of pulmonary hemorrhage observed in percutaneous transthoracic biopsy is 5%-10% [1, 2]. Hemorrhagic disease is another cause of bleeding, which may easily be overlooked. Patients may have no history of bleeding, or have unexpected hemorrhage after invasive operation. Medical history is important for diagnosis.

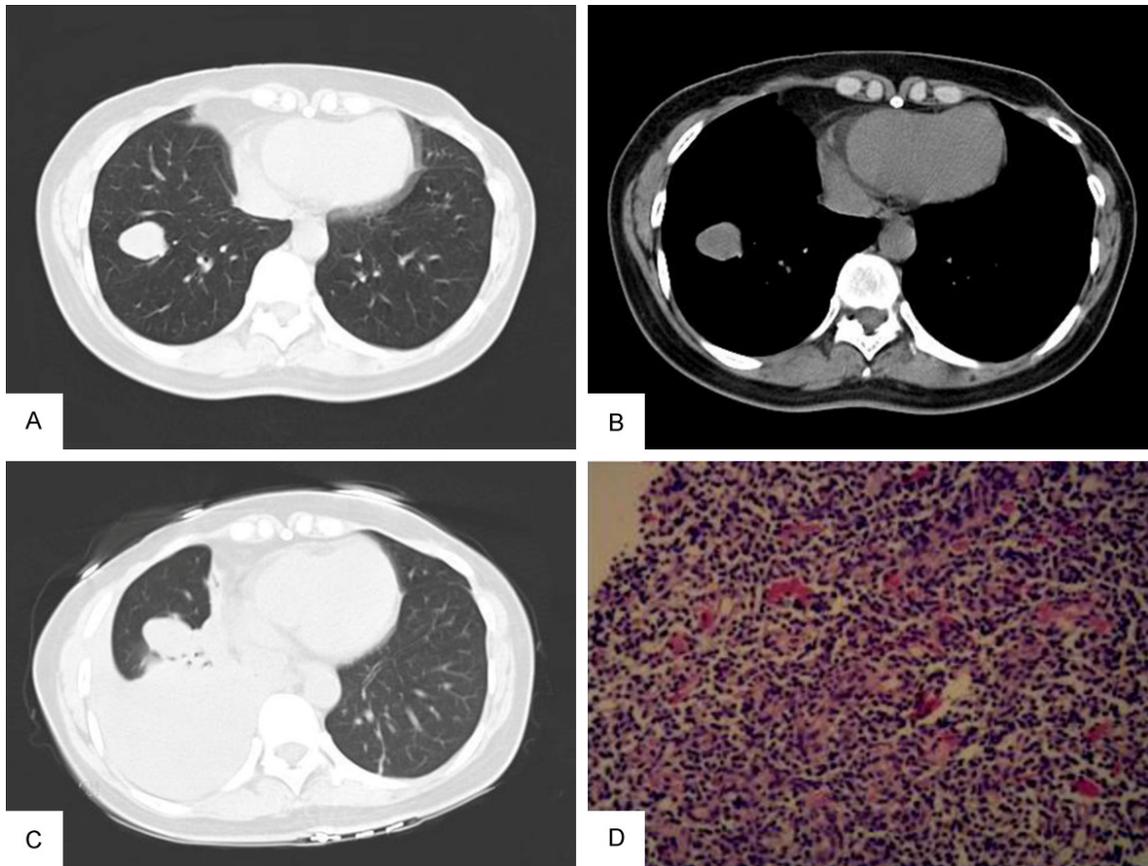


Figure 1. A and B. CT scan showed a solitary mass at the right lower lobe; C. CT scan showed moderate pleural effusion after biopsy; D. Pathological finding of SFT.

In our case, the lung mass is diagnosed as solitary fibrous tumor (SFT). SFTs arising from the parenchyma are rarely reported [3]. It is often asymptomatic with a slowly growing mass. The majority of tumors are benign. However, 10-20% of tumors show malignant features. All SFT patients need long-term follow-up for 15 to 20 years [4]. Complete surgical resection is the preferred therapy for SFTs.

Although hemorrhage is a common complication of lung biopsy, hemorrhagic disease should be taken into account when the patients had inexplicable acute bleeding especially with the history of bleeding tendency.

Disclosure of conflict of interest

None.

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