

# Pneumothorax Found during Health Check-up as a Manifestation of Thoracic Endometriosis

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## ABSTRACT

Women of reproductive age group who experience the catamenial pneumothorax and temporal respiratory symptoms may lead the physician to the possibility of thoracic endometriosis. We herein describe a 38-year-old woman who initially visited the medical checkup-institute to discover problems that may be harmful to the future health of asymptomatic examinees. Chest radiography showed a right-sided pneumothorax. On further questioning the patient felt uncomfortable in the right back of chest that coincided with her current menstrual period since past 1 year. A presumptive diagnosis of thoracic endometriosis prompted us to submit her to video-assisted thoracoscopic surgery to obtain tissue for pathologic examination. Thoracoscopy showed extensive endometriosis-like lesions involving the right posterior hemidiaphragm. A pathologic examination of the resected tissue confirmed the very rare diagnosis of thoracic endometriosis.

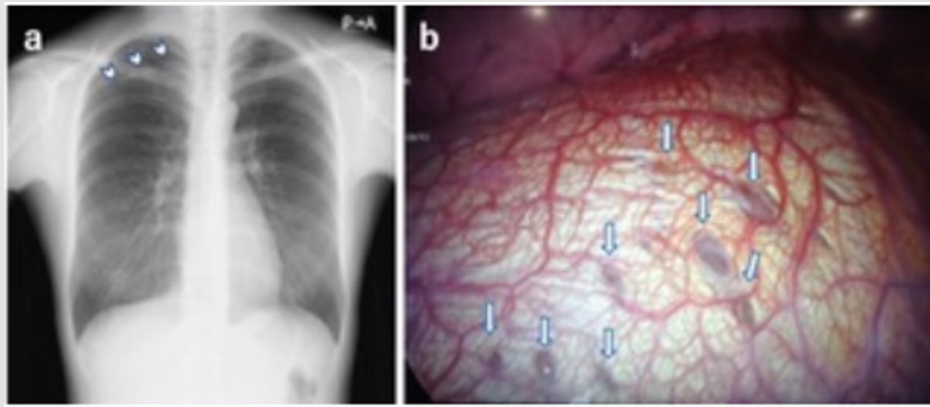
## Introduction

Endometriosis is defined as growth of endometrial glands and stroma outside the endometrial cavity [1,2]. The incidence of endometriosis is 15% or more among reproductive-age women, and about 10-15% of women with endometriosis have extrapelvic disease: however, the exact prevalence of thoracic endometriosis is unknown [3-5]. Weighing clinical suspicion carries to diagnosis of thoracic endometriosis. The clinical manifestations of thoracic endometriosis can be variable, with many patients being asymptomatic. The common symptoms include chest pain, dyspnea, or cough around the time of her menstrual cycle. This report mentions a very rare case of thoracic endometriosis presenting with pneumothorax accidentally found during health check-up.

## Case Report

A 38-year-old woman, gravida 1, para 1, was initially visited the unique institute (namely Ningen Dock in Japan) of complete medical check-up to discover problems that may be harmful to

the future health of asymptomatic examinees. Chest radiography revealed a right-sided pneumothorax (Figure 1a). On further questioning, she felt uncomfortable in the right back of chest that coincided with her current menstrual period since past 1 year. She reported regular menstrual cycles, and never had dysmenorrhea or dyspareunia. She denied fevers, chills, shortness of breath, chest pain, fever, or chills. Although it is rare, these circumstantial situations led us to a presumptive diagnosis of thoracic endometriosis. We decided to proceed with video-assisted thoracoscopic surgery to obtain a definitive diagnosis. Thoracoscopy revealed extensive endometriosis-like foci involving the right posterior hemidiaphragm (Figure 1b). The involved area was fulgurated and resected, and the diaphragm was repaired using a direct suture. A pathologic examination of the resected tissue confirmed endometriosis. Subsequent MRI of her pelvis detected endometriosis cyst measuring 38x40 mm in the left ovary. To date, she is using gonadotropin-releasing hormone analogues for 6 months and remains asymptomatic.



**Figure 1:**

- (a) Chest X-ray demonstrating a right-sided pneumothorax (arrowheads) at the health check-up examination.  
 (b) Thoracoscopic aspect of diffuse endometriosis involving pleural surface of the diaphragm (arrows).

### Comments

Diagnosis of thoracic endometriosis results heavily from suspicion [3-5]. Most patients will present with symptoms consistent with catamenial pneumothorax: shortness of breath, cough, and pleurisy. In our case, however, pneumothorax found by chance during medical check-up led us the possibility of thoracic endometriosis, taken together with retrospective questioning on cyclic thoracic uncomfortable complaint. Chest radiograph, CT, MRI, thoracentesis, and bronchoscopy have been deemed useful in evaluating thoracic endometriosis [3-5]. However, video-assisted thoracoscopic surgery remains the most accepted options for both definitive diagnosis and surgical treatment. The majority of cases of thoracic endometriosis occur in the third and fourth decade of life, compared with younger peak incidence for pelvic endometriosis [6-8]. Right-sided pneumothorax is seen in most instances. In thoracic endometriosis it assumes even more importance due to the fact that extra pelvic endometriosis usually has concomitant pelvic endometriosis [3-5]. Although the patient is still hormonal suppression, the incidence of endometriosis (15% or higher) and the likelihood of its progression prompted us to report the timely diagnosis followed with adequate medical managements. This study can be suggestive as it not only revealed a very rare diagnosis, but also highlight that a highly suspected thoracic endometriosis should be considered in women of a menstruating age.

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### Disclosure Statement

The authors declare no conflict of interests regarding the publication of this report.

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