

# Bilateral ground-glass opacities and respiratory failure due to Thoracic Endometriosis Syndrome

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## Introduction

**Thoracic endometriosis syndrome (TES)** is a rare condition characterized by the presence of endometrial-like glands and stroma within the thoracic cavity. It may manifest as catamenial hemothorax or pneumothorax, catamenial hemoptysis, and lung nodules. Diagnosis typically requires a combination of imaging and interventional techniques, like bronchoscopy and video-assisted thoracoscopic surgery (VATS).

## Case Presentation

We report a case of a 42-year-old woman presented to the emergency department with multiple episodes of hemoptysis. She was an active smoker with a known medical history of pelvic endometriosis and recurrent episodes of blood expectoration. Digital x-ray and chest CT scan revealed multiple bilateral ground glass opacities (**Figure 1**). A transthoracic echocardiogram was performed with normal findings, and serologic laboratory tests for vasculitis were negative. The patient developed acute respiratory failure and was initiated to broad-spectrum antibiotics, high-dose corticosteroids and hormonal therapy including triptorelin (a gonadotropin-releasing hormone analogue) and desogestrel (a progestin). Following clinical improvement, fiberoptic bronchoscopy was performed, revealing no endobronchial abnormalities within the bronchial tree. Cytological analysis of bronchial washings demonstrated abundant hemosiderophages. Bronchial brushings were further evaluated with immunohistochemical staining, which showed positive nuclear expression for **PAX8**, estrogen receptors (**ER**) and progesterone receptors (**PR**), supporting the presence of ectopic endometrial tissue. These results were diagnostic of thoracic endometriosis syndrome. The patient continued treatment with triptorelin and desogestrel, while a multidisciplinary discussion is underway regarding definitive surgical management with total hysterectomy and bilateral salpingo-oophorectomy.

## Conclusion

TES is a rare and important cause of hemoptysis and should be considered in the differential diagnosis, particularly when the clinical context includes a woman of reproductive age with recurrent episodes of hemoptysis.



Figure 1. Chest CT scan (top) and digital x-ray (bottom) demonstrating bilateral ground-glass opacities

## References:

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