Shortness of Breath: A Hormonal Phenomena
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INTRODUCTION
We introduce a case of extra-pelvic endometriosis involving the thoracic cavity presenting with a hemorrhagic pleural effusion without associated pneumothorax or hemothorax, or catamenial dyspnea.

BACKGROUND
The thoracic cavity is the most common extra-pelvic site of endometriosis, and the designation of catamenial hemorhax is present in about 14% in total of these patients. Hemorrhax is a common complication with most being right sided. Ultimately, this occurs secondary to proliferation and subsequent decidualization of pleural endometrial implants. Depending on the location will lead to associated symptoms. For example, involvement of the lung parenchyma could lead to hemoptysis whereas pleural based implantations could lead to hemorrhagic effusions and pneumothoraces. Early evacuation, pleurodesis, resection of implants, in addition to hormonal suppression, are the mainstays of treatment. Women of childbearing age and patient on ovulatory stimulants are especially at higher risk. A high index of suspicion is needed in these populations for early diagnosis and prevention of complications from an untreated hemothorax.

CASE PRESENTATION
A 22-year-old female with hypothyroidism presented to the emergency department with worsening abdominal distension for six months, intermittent dyspnea on exertion, and a non-productive cough. Oxygen saturation was 93%, and right basilar breath sounds were absent on physical exam. Her hematocrit was 32% and platelets were 504,000/dL. Chest x-ray displayed complete right sided opacification with subsequent mediastinal shift (Figure 1). CT showed a large right-sided pleural effusion with lung collapse (Figure 2), moderate volume ascites, and a heterogenous uterus. Patient later confided severe menstrual cramping with debilitating pelvic pain, however, denied catamenial dyspnea or chest pain.

Over two and a half liters of hemorrhagic fluid were removed which had 182,536 red blood cells and a hematocrit of 2% by analysis. Cultures were negative, and cytology showed pigment-laden macrophages but no malignancy. Paracentesis yielded a similar fluid analysis with no malignancy found. However, despite thoracentesis, there was no re-expansion of the lung which was concerning for entrapped lung. Video-assisted thoracostomy was performed which showed diaphragmatic pleural studding with “fish egg” appearing implants. Pleural based biopsy confirmed endometrial glands, and CD10 immunoreactivity in endometrial stroma, consistent with thoracic endometriosis. The patient ultimately was discharged home with a chest tube for serial drainages and subsequently started on hormonal suppression. At four weeks following discharge, she displayed findings of lung re-expansion on serial imaging modalities.

CONCLUSION
In conclusion, our case highlights a rare thoracic disease process with an uncommon presentation compared to previously documented cases. Our patient developed a massive effusion with relatively minimal symptoms likely due to its insidious nature and absence of catamenial thoracic symptoms, which is relatively uncommon in this population. We postulate a low hematocrit in this patient likely reflected the chronicity of a long standing hemothorax.

REFERENCES