



## Chronic migraine after catamenial pneumothorax: a case report of headache associated with extra-abdominal endometriosis

Jovana Gobbi Marchesi Ciriaco<sup>1</sup>, Lucas Grobério Moulim de Moraes<sup>2</sup>, Laíssa Fiorotti Albertino<sup>3</sup>, Bianca Garcia Sardi<sup>3</sup>, Brenda Comper<sup>3</sup>, Beatriz Gomes da Fonseca<sup>3</sup>, Breno Sousa Paiva<sup>3</sup>, Carlos Eduardo de Nadai<sup>3</sup>

<sup>1</sup>Professor of neurology at the Federal University of Espírito Santo, Vitória, Espírito Santo, Brazil

<sup>2</sup>Neurology residente a the Federal University of Espírito Santo, Vitória, Espírito Santo, Brazil

<sup>3</sup>Medical students at the Federal University of Espírito Santo, Vitória, Espírito Santo, Brazil

### Introduction

Endometriosis is a chronic condition characterized by the presence of endometrial tissue outside the uterus, which can result in chronic pelvic pain and infertility. Its pulmonary form is rare and manifests with chest pain, hemoptysis, pneumothorax, and catamenial hemothorax. Migraine is a neurological disorder characterized by intense headache attacks associated with nausea, vomiting, and photophobia, more frequent in women of reproductive age. Migraines are more common in women with endometriosis, probably due to central sensitization and amplification of the pain response due to inflammation and chronic pain from endometriosis.

### Objective

To report an atypical case of endometriosis with catamenial pneumothorax in a patient whose menstrual migraine worsened and became chronic after the pulmonary condition.

### Case Report

A 35-year-old woman started having weekly episodes of headache and worsening related to the menstrual cycle. She suddenly presented with dyspnea and chest pain during her menstrual cycle, which progressed to pneumothorax, requiring two surgeries. Biopsy of the right upper lung lobe identified subpleural emphysema which, along with the clinical presentation and pelvic MRI, was presumptively diagnosed as catamenial pneumothorax. After the pneumothorax, the headache became daily, right temporo-occipital, intense (subjective pain scale 9/10), pulsating, radiating to the right hemiface, with intra and extracranial allodynia, aura with nausea, blurred vision, scotomas, photophobia and phonophobia. Post-crisis, mood swings and hyporexia. Dipyron, sumatriptan and tromethamine do not provide relief. She denies consuming foods that trigger migraines. Currently, at 48 years, she is in the menopause and infertile.

### Conclusion

Endometriosis-related migraine usually occurs during the menstrual period and tends to decrease in climacteric due to hormonal decline. In this case, however, the headaches worsened after menopause, suggesting anomalous foci of endometriosis, delaying the climacteric. Thoracic endometriosis is a rare presentation that manifests with right shoulder pain and hemoptysis during the menstrual period, consistent with this patient's presumptive diagnosis of deep thoracic endometriosis. Biopsy is a limited option as it may not detect endometrial tissue depending on the time of the menstrual cycle at which it is performed. The persistence of hormonal stimulation induced by endometriosis acts as a trigger for migraines, aggravated in the climacteric.