Thoracic endometriosis syndrome with catamenial pneumothorax among patients who underwent surgery at the Lung Center of the Philippines

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Introduction. Thoracic endometriosis syndrome (TES), a rare condition, most commonly manifests as a pneumothorax coinciding with the patient's menstrual cycle, which is known as catamenial pneumothorax (CP). Unlike other types of spontaneous pneumothorax, TES-CP carries a high risk of recurrence if not treated appropriately. International publications about TES and CP have been increasing, but data on developing countries remain scarce. Limited access to healthcare and a lack of awareness of TES-CP often lead to diagnostic and treatment delays, which are common in developing countries. This study aims to determine the characteristics, management, and outcomes of TES-CP patients who underwent surgery at the Lung Center of the Philippines (LCP).

Methods. The researcher utilized an uncontrolled longitudinal study that included all TES-CP patients who underwent surgery at LCP from January 2015 to June 2025. TES diagnosis was confirmed by histopathologic report. Data were collected via a retrospective review of medical charts.

Results. Among the 69 reproductive-aged female patients diagnosed with spontaneous pneumothorax, 26 (38%) had CP. Of these, 14 (54%) were reported as negative for endometriosis on the histopathology report, and four had unavailable biopsy results. Finally, 8 TES-CP patients were included in this study. The mean age of patients was 39 years (range: 25-46 years). Most were multigravid and multiparous, and all had normal BMI. Except for one, all had a history of pelvic endometriosis, while none were infertile. Seven cases had a history of previous pneumothorax episodes and prior surgeries (i.e., CTT and VATS). The interval from the first pneumothorax event to TES-CP diagnosis ranged from 10 days to 33 months. All presented dyspnea, while chest pain and shoulder pain are also common. Intraoperative findings revealed that only two patients had nodules, and the majority had pleural adhesions and diaphragmatic fenestrations. The mean time from admission to surgery was 3.5 days (range: 0-7 days). All underwent VATS, and the majority also underwent pleurodesis and diaphragmatic fenestration repair. All patients underwent pulmonary rehabilitation, while 75% patients received hormonal therapy. Recurrence was observed in two patients (25%). One patient underwent VATS alone without additional procedures. In contrast, the other patient underwent pleurodesis, diaphragmatic fenestration repair, and lung wedge resection. Pneumothorax recurred 18 days for 1st patient and about 3 months for 2nd patient despite hormonal therapy. No prolonged air leak and mortalities were recoded.

Conclusion. TES-CP remains a rare condition, with only eight cases reported in approximately 11 years. Although CP was common in reproductive-aged women admitted to LCP, most were negative for endometriosis on biopsy. Most patients were multiparous, with prior pelvic endometriosis and repeated pneumothorax events before diagnosis, highlighting the frequent delay in recognizing TES-CP. Before the current admission, all had a previous diagnosis of pneumothorax, which did not resolve despite previous management via CTT or VATS. TES-CP should be considered in reproductive-aged women with recurrent pneumothorax; however, accurate diagnosis is vital to ensure appropriate surgical and medical treatment is provided to minimize recurrence. Studies with a larger sample size examining the predictors of recurrence in TES-CP are warranted.