We report a case of recurring catamenial pneumothorax with concurrent pelvic endometriosis. Thoracoscopy revealed a blue-like lesion on top of the dome of the right hemidiaphragm. Microscopic examination of biopsy specimens showed endometriosis. The patient was treated with a Gn-RH analogue and remains well without further evidence of pneumothorax after six months.

(CHEST 1991; 100:851)

\[ \text{Gn-RH} = \text{gonadotropin-releasing hormone.} \]

S
ince the first description by Maurer et al\(^1\) of recurring pneumothorax during menstruation, only about 65 cases of catamenial pneumothorax have been reported and reviewed in the literature. Endometriosis might be the most important factor in most cases of recurrent catamenial pneumothorax. Interesting is the high preponderance of right lung symptoms, attributed to frequently occurring congenital defects of the right hemidiaphragm\(^3\) and continuous flow of peritoneal fluid circulating from the pelvis to the right upper quadrant of the abdomen.\(^3\)

Pleuro-pulmonary endometriosis may be treated by hormonal suppression, such as progestins or testosterone derivatives (eg, danazol). More recently, Gn-RH analogues have been shown to be an efficacious alternative for treatment of pelvic endometriosis.\(^4\) We describe herein a case of recurrent catamenial pneumothorax due to pleural endometriosis, successfully treated by a Gn-RH analogue.

**CASE REPORT**

A 29-year-old woman was referred for evaluation of recurrent right-sided chest pain and dyspnea. She had stopped oral contraception two years prior to admission, because she wanted to get pregnant. Ever since, she had observed monthly a teratizing right-sided chest pain, starting three days after the onset of menstruation. More recently, the chest pain was associated with dyspnea, and the chest roentgenograms during six consecutive monthly periods of catamenial symptoms each showed small (self-resolving) right-sided pneumothorax. Pregnancy had not yet occurred after two years; and besides the chest symptoms, dysmenorrhea was present.

Pelvic and thoracic cage endometriosis were suspected. Thoracoscopy was performed two months later, when a larger catamenial pneumothorax had recurred. A small dark-blue lesion measuring about 10 x 10 mm was noted on top of the dome of the right hemidiaphragm. Microscopic examination of biopsy specimens of this lesion revealed endometrial tissue. Laparoscopy performed two weeks afterwards confirmed extensive pelvic endometriosis.

Abdominal disease was largely excised at the time of this procedure. As the patient wished to preserve her reproductive potential, treatment was started with a Gn-RH analogue, goserelin (3.6 mg monthly subcutaneously). Since then, the episodes of chest pain and pneumothorax have abated.

**DISCUSSION**

Endometriosis involving the thoracic cage or lungs usually presents with catamenial symptoms and signs of pneumothorax, hemorthorax, or hemothorax. Rarely, a routine chest roentgenogram may reveal asymptomatic pulmonary nodules. Karpel et al\(^5\) reviewed 84 cases of pulmonary endometriosis, revealing an important preponderance of right-sided catamenial pneumothorax, with only a minority of patients presenting with concurrent pelvic endometriosis. Recently, Shahar and Angelillo\(^6\) described a first case of catamenial pneumomediastinum.

Generally, pulmonary symptoms with cyclic occurrence at the onset of the menses are sufficient for diagnosis of pulmonary endometriosis, and biopsy material is not mandatory;\(^7\) however, Muller and Nelems\(^8\) pointed out that catamenial pneumothorax may occur without endometriosis, presumably caused by passage of air from the female genital tract into the peritoneum and from there into the thorax through a congenital defect in the diaphragm. This requires the absence of a cervical mucus plug, as in the menstrual phase of the cycle.

It is recommended that treatment of pulmonary endometriosis be based on (a) the patient's age and desire for future fertility, (b) the frequency of recurrence, and (c) the life-threatening character of the symptoms. When a patient with catamenial pneumothorax undergoes thoracotomy, an excision of the lesion with chemical or abrasive pleurodesis is recommended to prevent further recurrences of pneumothorax.\(^4\)

If the patient wishes to preserve her reproductive potential, hormone suppression therapy may be used. Analogues of Gn-RH represent the most definitive method available for disrupting ovarian steroidogenesis to induce resolution of endometriosis; Gn-RH agonists, such as goserelin, have fewer, milder, and less bothersome side effects and a rapid reversibility following cessation of therapy.

Analogues of Gn-RH have proven their efficacy in the treatment of pelvic endometriosis. Our case suggests a beneficial effect in pleuropulmonary endometriosis as well.

**REFERENCES**