



Figure. Thoroscopic image of the diaphragm. Multiple fenestrations can be observed around the phrenic nerve of the diaphragm through which it is possible to visualize the dome of the liver.

The fact that such foci most commonly occur in the diaphragm and favor the right side could support this hypothesis.¹⁻³

We report the case of a 40-year-old patient with no medical history of note who experienced 3 episodes of right pneumothorax with pleuritic pain, nonproductive cough, and mild dyspnea. The episodes were unrelated to menstrual cycles and none appeared during her menstrual period. The first 2 episodes were treated with chest drainage and took place 20 days apart. The third episode occurred 7 months after the previous episodes and treatment by thoracoscopy was undertaken. No pleuropulmonary lesions were found during this procedure. Biopsies of the parietal pleura and lung were taken but no abnormalities were found in subsequent pathology. The only evident lesions were multiple fenestrations around the phrenic nerve of the diaphragm through which the liver could be seen (Figure). The only therapeutic procedure performed was talc pleurodesis. The outcome was satisfactory with no complications or recurrences during 1 year of follow-up. Subsequent gynecologic studies found no menstrual abnormalities or endometriosis. The patient reported frequent dyspepsia and nonspecific abdominal pain which were not related to her menstrual cycle or sexual intercourse.

The literature contains few references to multiple diaphragmatic defects in the context of recurrent pneumothorax of a catamenial type.^{3,4} In our study the lack of relation to menstrual cycles and the absence of a finding of pleural and diaphragmatic endometriosis during thoracoscopy performed during menstruation led us to rule out this diagnosis. It is therefore worth asking whether the fenestrated diaphragm could be related to the mechanism producing recurrent pneumothorax or whether it is merely an additional thoroscopic finding.

Some authors have suggested that the entry of air through the uterus during sexual intercourse (primarily in the genupectoral position and by orogenital insufflation) causes nonsurgical pneumoperitoneum.^{3,5} Due to the spontaneous absorption of the pneumoperitoneum and the taboo over mentioning topics of a sexual nature that is often present when taking a medical history, it is difficult to ascertain the true incidence of this association, which may be underestimated.⁵ Some authors have hypothesized the combination of these 2 rare

mechanisms; thus, the entry of air through the uterus during coitus or exercise (which could be associated with a reduction in cervical mucus during menstruation) would cause a pneumoperitoneum, with the subsequent passage of air to the pleura through diaphragmatic fenestrations.^{1,4}

We believe this theory is valid for exceptional cases in which, like ours, the sole abnormal findings were multiple fenestrations in the right hemidiaphragm, in the absence of clinical signs suggesting other causes of pneumothorax. Treatment of our patient with talc pleurodesis by thoracoscopy was satisfactory.

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Multiple Diaphragmatic Fenestration as the Only Thoroscopic Finding in Recurrent Pneumothorax

To the Editor: Catamenial pneumothorax is defined as a recurrent pneumothorax whose episodes appear 48 to 72 hours after menstruation.¹⁻³ Since the condition was first described in 1958, many questions have arisen over its pathophysiologic mechanisms and some authors have postulated a multifactorial origin.^{1,3} It is estimated that catamenial pneumothorax is associated with pleural or diaphragmatic endometriosis in only 22% to 37% of cases and with congenital diaphragmatic fenestrations or fenestrations secondary to endometriosis in 19% to 33% of cases.^{1,3} These lesions have been described as intraoperative findings and have led some authors to postulate the theory of transdiaphragmatic passage of air or the involvement of foci of endometrial tissue.¹⁻³

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