

中文題目：一位 47 歲月經性氣胸女性之案例報告

英文題目：A 47-year-old female case of catamenial pneumothorax.

作者：邱逸民¹ 鄭文建²

服務單位：¹ 中國醫藥大學附設醫院內科部, ² 中國醫藥大學附設醫院胸腔科

Abstract

There is plenty of differential diagnosis of chest pain and shortness of breath. Thus, detailed history taking is required to narrow down possible diagnosis. Catamenial pneumothorax (CP) is always an important differential diagnosis of menstrual-related chest pain and shortness of breath in reproductive-age women. Here we presented a case with typical menstrual-related chest pain and shortness of breath, complicated with diaphragm defects, thoracic endometriosis and endometriosis-related ureter compression. She received Video-Assisted Thoracic surgery(VATS) and final pathology revealed thoracic endometriosis.

Introduction

Catamenial pneumothorax is defined as spontaneous recurrent pneumothorax, occurring in women in reproductive age.[1] Diagnosis can be hinted by high recurrence rates of lung collapse in a woman of reproductive age with endometriosis[4]. Mean onset age was between 32-35 years and it is an uncommon situation. However, there were still published case reports of catamenial pneumothorax above forty years old. Kazunori Sugimura et al reported a 41-year-old woman presented with monthly breathlessness was diagnosed CP by thoracoscopy. Operation findings included red, black spots or blueberry spots in the right middle lobe and multiple small defects in the right diaphragm. [2] About 60% of pulmonary endometriosis cases are associated with pelvic endometriosis.[3,5] A combined surgical and hormonal treatment is considered the standard management of CP, as postoperative recurrences are common and hormonal therapy is useful to prevent them.

Case presentation

This 47-year-old female housewife with past history of uterine myoma and endometriosis suffered from right chest pain accompanied with shortness of breath especially during menstrual period. This recurrent condition lasted for six months. She was then accidentally found right pneumothorax during health examination. One month later she came to emergency room due to lower abdominal pain, where bedside echo revealed right hydronephrosis. Plain film shows no radiopaque stone in the kidneys or ureters. Vaginal ultrasound revealed one right unilocular cyst and several left multilocular cysts and the largest one was 4.56 x 3.26cm. CA-125:345 U/mL. Endometriosis was highly suspected. Abdominal computed tomography(CT) revealed right hydronephrosis and hydroureter, which obstruction level near right adnexa and right internal iliac artery. Chest x ray [Fig 1] and chest CT showed right pneumothorax and right blebs. Catamenial pneumothorax was suspected. Thus Chest surgeon arranged VATS, which showed multiple ruptured cavities over right diaphragm [Figure 2], right upper lung blebs, blueberry spots in the right upper lobe lungs.[Figure 3] They did surgical repair for diaphragm, resected blebs, and did pleurodesis. The pathology of resected diaphragm revealed endometriosis[Fig 4]. After operation,

she received hormonal therapy with gestrinone.

Fig 1. Chest x ray at admission revealed right pneumothorax



Fig2. Diaphragm defects and some red spots on the diaphragm were discovered during VATS

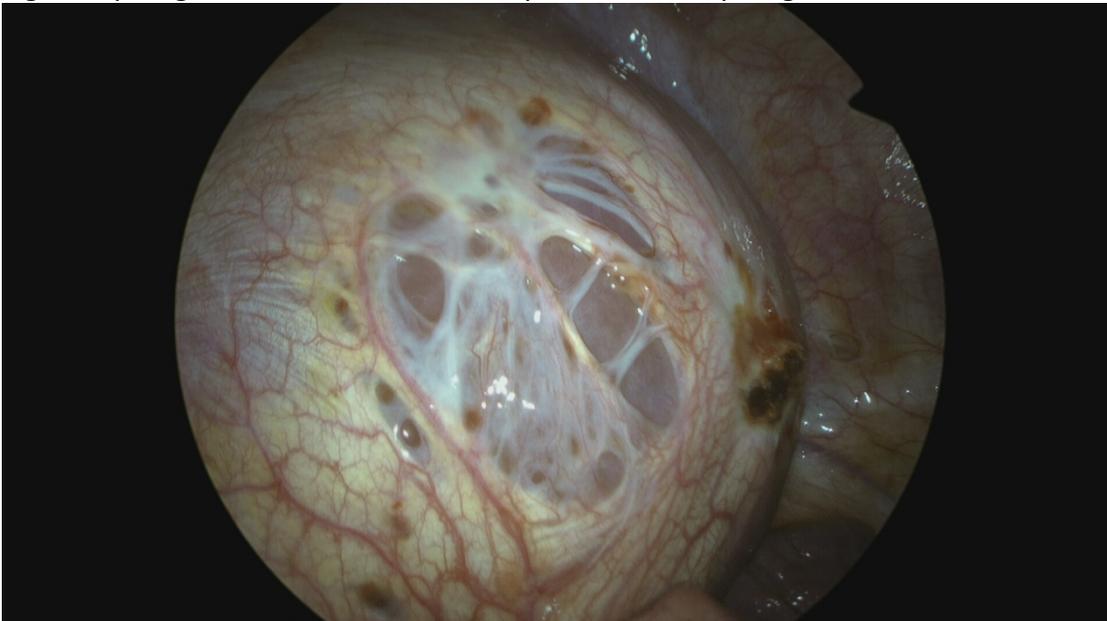


Fig 3. Thoracoscopy shows blueberry spots in the right upper lobe lungs.

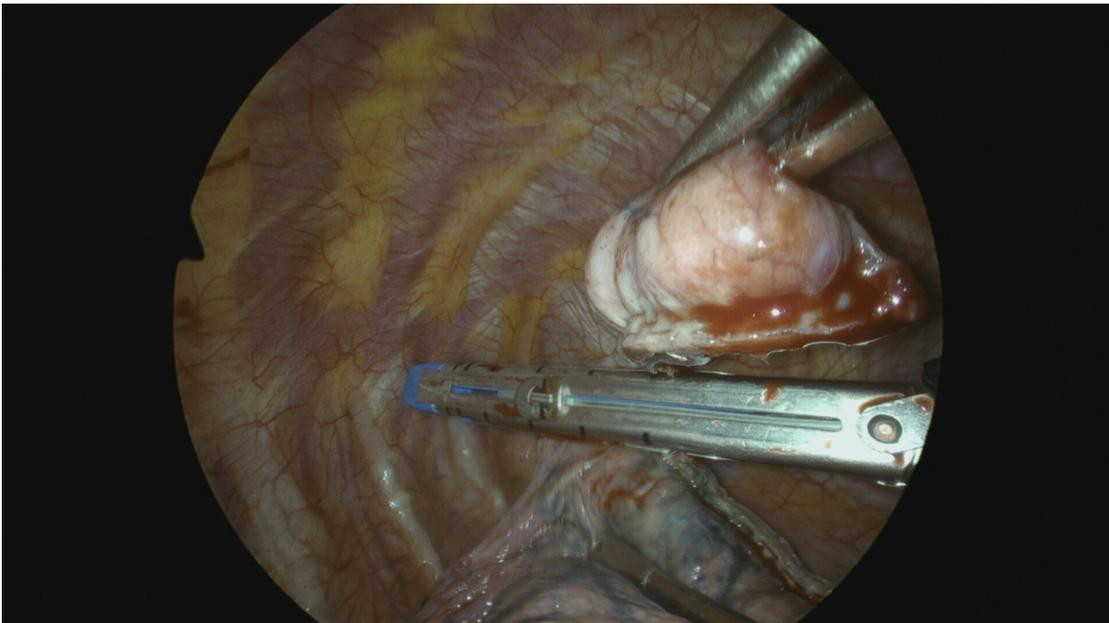
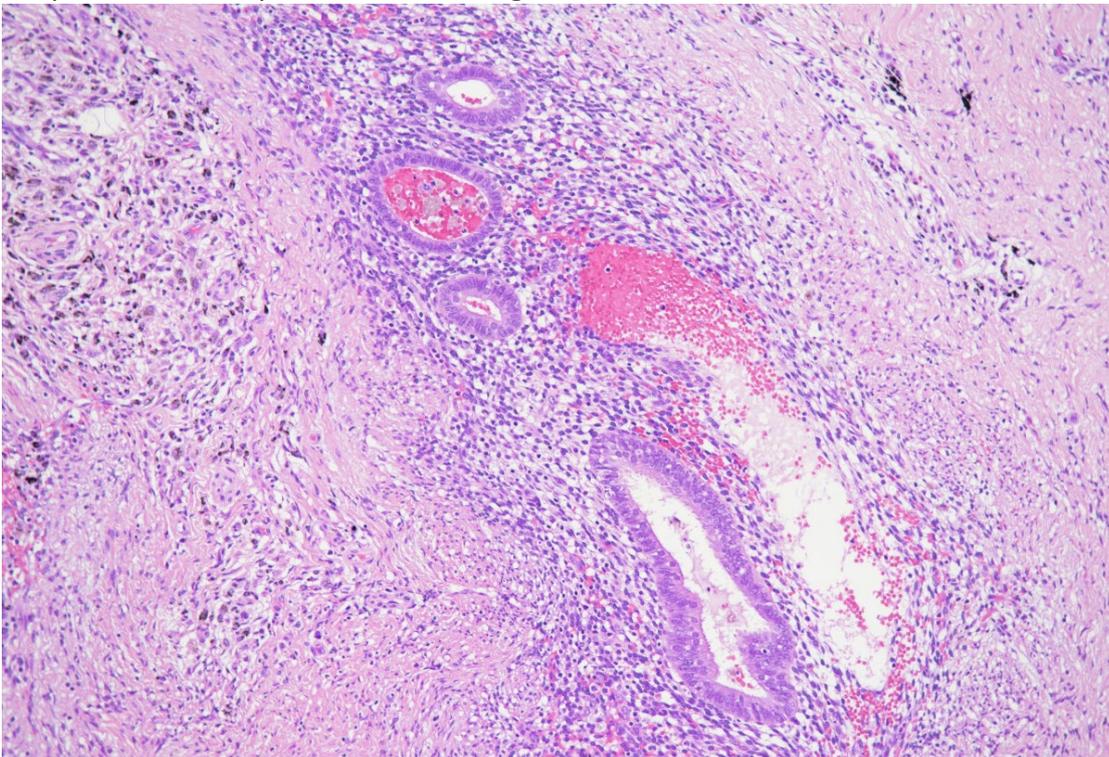


Fig 4. Resected diaphragm pathology showed endometriosis, with endometrial glands and stroma deep in muscular layer, with hemorrhage.



Discussion

Thoracic endometriosis is a major factor for catamenial pneumothorax. VATS is the gold standard for the diagnosis of thoracic endometriosis.

One review indicated about 55% of pulmonary endometriosis cases are associated with pelvic endometriosis.[3] . They included eighteen studies with a total of 490 patients. Pneumothorax was found mainly in the right lung (456 of 490 cases, 93%). Diaphragmatic endometriosis and/or nodules were observed in 265 of 297 cases (89%). Recurrence rate varied from 14.3% to 55%. [3] The surgical aspect should included removal of blebs and bullae, wedge resection, and pleurodesis.

M Fukuoka et al [7] concluded all of the thoracic endometriosis-related pneumothorax patients

had endometrial implants in the diaphragm, while some of them also had endometriosis in the pleura. Another case report [6] also reported one 42-year-old presented with right side chest pain occurring one week after menses. She underwent VATS with and revealed multiple diaphragmatic fenestrations. These results were compatible consistent with our case.

Korom et al [8] reported 73 patients with catamenial pneumothorax, 38.8% had diaphragmatic lesions, such as diaphragmatic endometriosis or perforation, 29.6% had endometriosis of the visceral pleura, 23.1% had bullae/blebs, and 8.5% had no lesions.

Conclusion

In conclusion, catamenial pneumothorax should be suspected in high recurrence rates of typical symptoms in premenopausal women with endometriosis. VATS should be arranged during menses for better approaching thoracic endometriosis findings included diaphragmatic defects, endometriosis spots on the diaphragm, pleura or lungs. Diaphragm should be carefully checked to find the possible lesions for diagnosis of catamenial pneumothorax.

References

1. P. Fonseca, Catamenial pneumothorax: a multifactorial etiology, *J. Thorac. Cardiovasc. Surg.* 116 (5) (1998) 872–873.
2. Sugimura K, Sasaki O, Shinoda M, Kawasaki S, Shinkai M. Catamenial pneumothorax: a cause of monthly breathlessness. *Lancet.* 2019 Sep 14;394(10202):952
3. Gil Y, Tulandi T. Diagnosis and Treatment of Catamenial Pneumothorax: A Systematic Review. *J Minim Invasive Gynecol.* 2020 Jan;27(1):48-53
4. Tsakiridis K, Triantafilopoulou K, Minadakis G, et al. Catamenial pneumothorax recurrence due to endometriosis. *Respir Med Case Rep.* 2020;30:101036.
5. Elia S, De Felice L, Varvaras D, Sorrenti G, Mauriello A, Petrella G. Catamenial pneumothorax due to solitary localization of diaphragmatic endometriosis. *Int J Surg Case Rep.* 2015;12:19-22.
6. Aissa S, Benzarti W, Alimi F, et al. Catamenial pneumothorax revealing diaphragmatic endometriosis: a case report and revue of literature. *Pan Afr Med J.* 2017;27:112
7. Fukuoka M, Kurihara M, Haga T, Ebana H, Kataoka H, Mizobuchi T, Tatsumi K. Clinical characteristics of catamenial and non-catamenial thoracic endometriosis-related pneumothorax. *Respirology.* 2015 Nov;20(8):1272-6.
8. Korom S, Canyurt H, Missbach A, Schneiter D, Kurrer MO, Haller U, Keller PJ, Furrer M, Weder W. Catamenial pneumothorax revisited: clinical approach and systematic review of the literature. *J Thorac Cardiovasc Surg.* 2004 Oct;128(4):502-8.