Protocols for Treating Thoracic Endometriosis & Catamenial Pneumothorax

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In response to our friend and colleague Dr. Tulandi, we would like to describe our collective experience with catamenial pneumothorax (CP), which likely represents one of the largest cohorts to date. We began reporting our experience with CP as early as the 1990s[1-6] although our first cases dated to the 1980s.

Thoracic endometriosis is a rare manifestation of extragenital endometriosis.[7] Lesions on the diaphragm and on the visceral pleura are the most commonly described sites (38.8% and 29.6%, respectively).[8] Lesions of the parenchyma are uncommonly encountered and we recently reported the first case of bilateral parenchymal endometriosis.[7, 9, 10] Thus, the differential diagnosis for a patient presenting with CP is broad and should include endometriosis of the lung, the chest wall, and the diaphragm, as well as possible fenestration of the diaphragm.

Medical treatment is the first step in the management of symptoms; however, this can be expensive and recurrence is high with discontinuation. By contrast, chemical pleurodesis, pleurectomy, and segmental resection have all proven successful in the resolution of symptoms.[11] The use of video-assisted thoracoscopy (VATS) allows for direct visualization of implants and nodules throughout the thoracic cavity and the ability to resect apical blebs, parenchymal and diaphragmatic implants, or to repair diaphragmatic fenestration.[6] Smaller implants can be treated using bipolar, CO2 laser, or plasma energy. Exploratory thoracotomy, previously used regularly for diagnosis and treatment, now should be reserved for cases in which minimally invasive techniques fail.

Based upon our understanding of CP, we have developed a protocol for these patients that employs a multidisciplinary approach of VATS and video-assisted laparoscopy, thereby optimally addressing pelvis, thoracic cavity, and sub-diaphragmatic disease in a single operation.[6] We have found we can easily address lesions of the diaphragm with mobilization of the liver during the abdominal portion of the case and feel that laparotomy is not necessary and in fact is detrimental to the patient. In a recently posted video we demonstrate techniques for diaphragmatic stripping that are used both in instances of metastatic cancer as well as severe endometriosis of the diaphragm.
[See http://www.youtube.com/watch?v=jMXfRW-Whfc].

In our exploration of the upper abdomen in these severe cases, we have also identified and treated three cases of liver endometriosis.[12]

Of note, we have encountered no instances of carbothorax complicating our post-operative course over the many years that we have employed our multi-disciplinary team approach. The minimally invasive combined approach to thoracic endometriosis should be the surgical option of choice for these patients.

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