

Disorders of the Pleura

SESSION TITLE: Medical Student/Resident Disorders of the Pleura Posters

SESSION TYPE: Med Student/Res Case Rep Poster

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RECURRENT SPONTANEOUS PNEUMOTHORAX IN A YOUNG FEMALE PATIENT

REED GEISLER TY GILKEY CHELSEA LEIPOLD ASOK DASGUPTA AND PARESH TIMBADIA

INTRODUCTION: Spontaneous pneumothorax (PTX) has an incidence of 1.2 to 6 cases per 100,000 females. Catamenial PTX is a rare type of secondary spontaneous PTX concomitant with menstruation, with an incidence of 3-6% among women initially diagnosed with primary spontaneous PTX. The pathophysiology of catamenial PTX involves the presence of endometrial tissue within the thoracic cavity, involving the pleura, diaphragm, or tracheobronchial tree, also known as thoracic endometriosis. These symptoms occur within 72 hours before or after menstruation. Due to the rarity of catamenial PTX, this condition represents a diagnostic & therapeutic challenge.

CASE PRESENTATION: A 30 year old African American female presents with chief complaint of right (Rt) sided chest pain & dyspnea. The patient had experienced bilateral chest pain one day after beginning menstruation, with the left-sided chest pain resolving & progression of Rt-sided chest pain over the following days. She also had a cough for one week that had resolved at the time of presentation. Past medical history was remarkable for a previous episode of PTX on the left side 2 yrs prior, treated initially with chest tube drainage & subsequently requiring Video-Assisted Thoracoscopic Surgery (VATS) pleurodesis for recurrence. Pleural biopsy at that time showed acute & chronic pleuritis with inflammatory cells and fibrin. Chest Computed Tomography (CT) showed no other significant pulmonary parenchymal abnormality or cystic disease. Other co-morbidities included obesity, hay fever and acid reflux disease. Besides occasional marijuana use, no cigarette smoking or alcohol use reported. Family history was negative for pulmonary disease, endometriosis or PTX. Physical exam upon admission showed normal vital signs & diminished breath sounds on the Rt side suspicious for PTX. Chest x-ray (CXR) showed large Rt PTX with 7 cm pleuropulmonary separation without mediastinal shift. Small bore pigtail chest tube was placed with resolution of PTX. Right-sided VATS with pleurodesis was performed for definitive treatment. Post-operative course was unremarkable & the patient was discharged 2 days later. Follow-up CXR a week later showed complete resolution of small right apical PTX.

DISCUSSION: Catamenial PTX should be suspected in the differential for young women with recurrent PTX coinciding with menstrual periods & in the absence of other common etiologies. Early identification, acute management with chest tube insertion, & definitive treatment with VATS pleurodesis is usually needed. Other preventative treatment may include hormonal therapy.

CONCLUSIONS: This case illustrates an example of diagnosis & management of catamenial PTX, a rare type of spontaneous PTX in women associated with menstruation & caused by thoracic endometriosis.

Reference #1: Noppen, M. (2010). Spontaneous pneumothorax: Epidemiology, pathophysiology and cause. *European Respiratory Review*, 19(117), 217-219.

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