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PERIMENSTRUAL ASTHMA – A PULMONOLOGICAL-GYNECOLOGICAL CONUNDRUM AND UNIQUE HIGH-RISK ASTHMA PHENOTYPE

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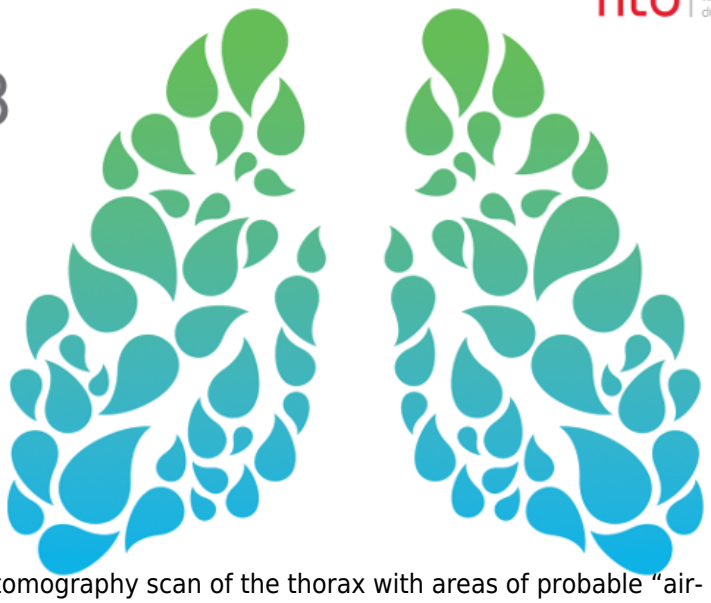
Objective: Introduction: Perimenstrual asthma (PMA) is a commonly observed phenomenon of worsening asthma symptoms occurring just before and/or during the first few days of menstruation in about a third of childbearing women. The presence of PMA is associated with a severe course of disease and higher risk of poorer outcomes, such as increased number of asthma-related emergency department (ED) visits, hospitalizations, intubations, and deaths. Its etiology remains unclear, and to date, there are no guidelines specifically addressing treatment of PMA.
Case Presentation: We describe the case of a previously healthy 27-year-old Caucasian female, never-smoker, who presented with respiratory symptoms (marked exertional dyspnea and a dry, hacking cough) at the end of the third trimester of her pregnancy. A year later, she frequented the ED due to shortness of breath and wheezing. A comprehensive work-up, including spirometry with bronchodilator (reversible moderate to severe airflow obstruction), skin-prick test for inhalational allergens (positive for house dust mites and grass pollen),



radiological imaging (chest x-ray and computed tomography scan of the thorax with areas of probable “air-trapping”), as well as a history of exacerbations, confirmed the diagnosis of severe allergic asthma. Despite her good inhaler technique and adherence to therapy (high dose ICS/LABA combination, antileukotriene, and tiotropium bromide), she would experience acute clinical deterioration and decline in pulmonary function each month, immediately preceding menstruation. These cyclical episodes were consistent with PMA and necessitated a short course (5-7 days) of intravenous and oral corticosteroids. Having failed conventional treatments, the then 30-year-old patient was assessed by the multidisciplinary team of the hospital’s severe asthma service. It was decided that she was a good candidate for immunomodulatory biologics as add-on therapy. After three cycles of subcutaneous omalizumab (450 mg), given every 4-6 weeks, asthma control has been regained, lung function improved and frequency of exacerbations reduced. Only one PMA-related attack requiring oral steroids has occurred thus far, following the second administration. She has recently received her fourth dose of this anti-IgE antibody. The hospital’s Drug and Treatment Committee has approved maintenance omalizumab therapy for the next six months.

Conclusion: PMA is an important clinical entity that needs to be revisited, with a focus on characterizing this unique high-risk asthma phenotype. This report serves to increase clinician awareness of PMA in difficult-to-treat severe asthmatic females. Further research is warranted to clarify the underlying pathophysiology of PMA, potentially leading to prevention of PMA exacerbations and/or optimization of treatment strategies to improve outcomes.