SYNCHRONIZED DISARRAY: DIAGNOSING PRIMARY CILIARY DYSKINESIA.

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Purpose: To recognize the key signs, symptoms, and medical history that can distinguish primary ciliary dyskinesia (PCD) from other respiratory illnesses. Also to identify the criteria necessary for a diagnosis of asthma.

Case: A 26-year-old female with a history of recurrent sinus and ear infections, pneumonia, and asthma presented with a persistent cough, wheezing, and dyspnea unresponsive to bronchodilators. Pulmonary function tests revealed an obstructive pattern without bronchodilator response, prompting further evaluation.

Methods: A single-patient case was analyzed through a retrospective review of clinical history, diagnostic evaluations, and treatment response. Pulmonary function tests, high-resolution computed tomography, and nasal nitric oxide (NO) testing were performed to assess airway obstruction, bronchiectasis, and potential PCD. Diagnostic criteria for PCD were evaluated based on clinical presentation, recurrent infections, and NO levels. The patient's response to treatment, including mucociliary clearance therapy, was monitored over time.

Impact/Discussion: PCD is a rare genetic disease that causes ciliary dysfunction, often misdiagnosed as asthma due to similar symptoms. Unlike asthma, PCD leads to fixed airflow obstruction rather than reversible airway inflammation. Our patient's lack of bronchodilator response and history of recurrent infections raised suspicion for PCD, which was supported by low nasal nitric oxide levels. PCD should be considered in patients with persistent symptoms, irreversible airflow limitation, and recurrent respiratory infections.

Conclusion: Asthma should be confirmed with pulmonary function testing, as many respiratory diseases mimic its symptoms. In patients unresponsive to standard treatment, a history of recurrent pneumonia, otitis media, and sinusitis should prompt evaluation for primary ciliary dyskinesia.