1.33 "Don't Take My Breath Away" - A Tale of Severe Preschool Asthma

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Background: Asthma is the most common chronic condition in childhood, affecting 14% of children worldwide. Symptoms typically begin during the preschool years and can lead to significant morbidity. **Case Study**: A 2-year-old male was referred to the respiratory service at CHI following his first Pediatric Intensive Care Unit (PICU) admission for acute severe asthma. The patient had a significant family history of asthma and atopy but no personal history of eczema or food allergies. Despite a stepwise escalation of asthma therapy, including inhaled corticosteroids combined with a long-acting beta-agonist, montelukast, and prophylactic azithromycin, the patient continued to experience recurrent exacerbations requiring hospital admissions. By his fourth PICU admission, his treatment included alternate-day oral steroids. Due to the severity of his condition and limited response to standard therapies, a trial of Dupilumab, an interleukin-4 (IL-4) receptor alpha antagonist, received institutional approval, despite being an unlicensed medication for preschool children.

Discussion: This case highlights the need for prescribing unlicensed asthma medications in severe preschool asthma to prevent life-threatening exacerbations. Given the lack of robust clinical data for this age group, respiratory specialists often rely on off-label prescribing, underscoring the urgent need for clinical trials to guide the safe and effective use of asthma medications in preschool children.

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