Commentary

iMedPub Journals
www.imedpub.com

American Journal of Pharmacology and Pharmacotherapeutics
ISSN 2393-8862

2023
Vol.10 No.1:142

Pregnancy Prevented Childhood Asthma

Maho Suzukawa *

Department of Clinical Research Center, National Hospital Organization, Tokyo National Hospital, Tokyo, Japan

***Corresponding author:** Maho Suzukawa, Department of Clinical Research Center, National Hospital Organization, Tokyo National Hospital, Tokyo, Japan, E-mail: futkyeta@umin.ac.jp

Received date: December 06, 2022, Manuscript No. IPAPP-23-15772; **Editor assigned date:** December 08, 2022, PreQC No. IPAPP-23-15772 (PQ); **Reviewed date:** December 19, 2022, QC No. IPAPP-23-15772; **Revised date:** December 29, 2022, Manuscript No. IPAPP-23-15772 (R); **Published date:** January 06, 2023, DOI: 10.36648/2393-8862.10.1.142

Citation: Suzukawa M (2023) Pregnancy Prevented Childhood Asthma. Am J Pharmacol Pharmacother Vol.10 No.1: 142.

Description

The most important and most recent aspects of the Japanese Pediatric Guidelines for the Treatment and Management of Asthma, which were released by the Japanese Society of Pediatric Allergy and Clinical Immunology, are discussed in this article. To address the 12 CQs regarding the treatment of childhood asthma, five new clinical questions have been added to the 2020 guidelines. When young children have three or more episodes of clear expiratory wheezing that last longer than 24 hours and can be improved with beta-2 agonist inhalation, infant and preschool asthma is diagnosed. Diagnostic therapeutic trials of one month with controller treatment can be used on children who do not clearly improve. The treatment level is adjusted in accordance with the control status and risk factor management as long as holistic care is provided since long-term management is initiated. This demonstrates that pediatric patients successfully transition into adult services. There are a few differences between the JPGL and other countries' guidelines. In order to determine whether the newly proposed management plans are useful for the Japanese population, additional evidence is obtained.

Interactions between Asthma Therapies and Novel Drug

During the coronavirus disease pandemic, the Precision Interventions for Severe and/or Exacerbation-Prone Asthma clinical trials network is actively evaluating novel treatments for severe asthma. As a result, it has needed to adapt to various clinical dilemmas that the COVID-19 pandemic presents. In the clinical care of asthma, pharmacologic interactions between established asthma therapies and novel drug interventions for COVID-19 infection, such as vaccines, biologics, and antivirals, have emerged as a significant and unexpected problem. In the context of antiviral treatment with ritonavir-boosted nirmatrelvir, impaired metabolism of some long-acting beta-2 agonists by the cytochrome P4503A4 enzyme may raise the risk of adverse cardiovascular events. Even though there is evidence to suggest that such interactions could occur, clinicians who treat asthma or administer COVID-19 treatments to asthma patients tend to ignore these issues. Asthma treatments and COVID-19 medications have never been shown to interact in a way that could be harmful to patients, so clinicians have not been given any direction on how to manage these interactions. The Precision Interventions for Severe and/or Exacerbation-Prone Asthma network looked at the literature and product information and shared our plans for treating asthma in the context of these new COVID-19–related therapies in this document. The mother-child cohorts of the Copenhagen Prospective Studies on Asthma in Childhood (COPSAC) have served as the foundation for 25 years of research into the causes, treatments, and natural history of asthma in children and related disorders. Clinical translational research, multi-omic data layers, embedded randomized controlled trials, and longitudinal deep phenotyping and exposure assessments from pregnancy are the hallmarks of COPSAC's approach. Pregnant women who benefited most from fish oil supplementation were identified in one study, suggesting the possibility of personalized prevention. This study also demonstrated that taking fish oil supplements during pregnancy prevented childhood asthma. According to COPSAC, early airway colonization with pathogenic bacteria is linked to an increased risk of asthma. In addition, it was discovered that airway bacteria are the cause of acute asthma-like symptoms that respond well to antibiotic treatment. COPSAC demonstrated that infant lung function can predict asthma and that an immature gut microbiome in early life is a risk factor for allergy and asthma. COPSAC has discovered novel susceptibility genes, early immune deviations, and metabolomics changes that are linked to asthma in children at the molecular level. As a result, the COPSAC research program has provided personalized prevention and treatment options as well as a deeper comprehension of the processes that lead to asthma in children.

Asthma Related Hospitalizations

The worldwide prevalence of severe asthma has remained stable, ranging from 4.3% to 4.9% for children and adolescents with asthma, respectively, despite advancements in asthma management over the past few decades. When compared to their less severe, better-controlled counterparts, patients with severe asthma continue to experience a higher burden of disease, including more frequent and severe exacerbations, worsened patient and caregiver quality of life, and associated higher mean annual total costs. Even among children with severe or poorly controlled asthma, there is a disparity in health care utilization; those exhibiting allergic sensitization have

higher adjusted rates of asthma exacerbations, asthma-related hospitalizations and emergency department visits; a few more days of taking oral corticosteroids and overall higher costs for health care compared to people who don't have allergies. The introduction of biologics to adults with severe asthma as well as children and adolescents presents an opportunity to potentially lessen the burden that asthma places on individual patients and society as a whole. Six biologics have been approved for the treatment of moderate to severe persistent asthma as of the time this article was published. Benralizumab and tezepelumab, two of the biologics, have been approved for children as young as 12 years old and omalizumab, mepolizumab, and dupilumab, three of the biologics, have been approved for children as young as 6 years old. These biologics should only be used sparingly in pediatric patients. Adolescents are grouped with adults in most biologic studies but are typically underrepresented in these studies, underscoring the need to expand the evidence base with real-world studies.6 For instance, in a study in patients 12 years or older investigating the efficacy of dupilumab to reduce the annualized rate of severe asthma exacerbations and improve FEV1, patients 12 to 17 years old comprised only 5.6% of the total study population. By comparison, the relative body of evidence supporting the use of these medications is not cost-effective at their current prices, especially if they are chosen without taking predictive factors and clearly defined efficacy outcomes into account. The burden of this cost may be greater in lower to middle-income nations where asthma severity has increased. The asthma specialist frequently finds themselves at a crossroads when trying to strike a balance between the benefits of improving asthma care and the potential dangers of using a medication with limited data for children and high costs. By providing a comprehensive examination of the profile of pediatric patients who may be served best by biologics, factors applicable to individual biologic choice, and considerations on when to discontinue these therapies with an eye toward future repercussions, we hope to address these concerns in this paper.