



Therapeutic Intervention in the Epigenetic Allergy

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INTRODUCTION

In recent decades, there has been a significant increase in the incidence and prevalence of allergic diseases. This is likely related to rapid environmental and lifestyle changes such as: B. Higher exposure to factors thought to have allergenic effects, but lower exposure to factors is known to be associated with protection against the development of allergies. Decreased exposure to microorganisms, lower proportions of unprocessed natural products in the diet, and other consequences of urbanization and westernized lifestyles are among the most prominent examples of the latter. Allergic susceptibility it is strongly believed that the effects of environmental factors on development and development are mediated through epigenetic mechanisms. H. Biologically relevant biochemical changes in chromatin that carries transcription-related information but do not affect the nucleotide sequence of the genome. Classical epigenetic mechanisms include DNA methylation and histone modifications such as acetylation and methylation. Moreover, microRNAs control gene expression at the mRNA level. Such epigenetic mechanisms are involved in key regulatory processes in cells that play a central role in allergy. These include the intensive management of cells such as T lymphocytes, and specific structural and effector cells in affected organs that provoke local clinical manifestations of allergy. Epithelial or smooth muscle cells of the airways of asthma. Given the multiple clinical (phenotype) and mechanistic (endotype) forms of allergic disease, targeted and stratified therapeutic strategies based on detailed clinical and molecular diagnostics are needed is. This gap may be filled by epigenetic approaches, as conventional diagnostic or therapeutic approaches are not sufficient [1,2].

DESCRIPTION

Breast milk contains large amounts of biologically active components that have a significant impact on the development of the intestinal microbiota. Exclusively breastfed infants have a different microbiota, with bifid bacterial species predominating

in the gut. The mechanisms underlying the anti-allergic effects of breast milk are most likely complex, as they also contain functional molecules with other components that enable epigenetic regulation. These are multifactorial diseases in which the genome alone cannot explain disease development, but rather genetic predisposition and various environmental factors contribute to its development. Environmental factors, especially dietary factors, during the early stages of life have been recognized as important factors in the pathogenesis of food allergy. There is increasing evidence that diet can influence the risk of developing food allergy, either through epigenetic mechanisms driven by dietary factors themselves or through modulation of the gut microbiota and its functional products. Gut microbiota and post-biotics may influence the risk of developing food allergy through epigenetic mechanisms. Epigenetic programming takes into account not only short-term effects on an individual's health status, but also effects observed in adulthood. The first thousand days of life represent a significant vulnerability window in which environmental factors, including dietary factors, may influence the risk of developing allergy through epigenetic mechanisms. From this perspective, it represents an intriguing window of opportunity and intervention. This review reports on the most important dietary factors that may influence oral tolerance through modulation of epigenetic mechanisms during early life [3,4].

CONCLUSION

Systemic Mastocytosis (SM) is a hematologic malignancy in which mast cells accumulate abnormally in various organ systems, including bone marrow, other internal organs, and skin. To date, little is known about the epigenetic alterations that contribute to the pathogenesis of SM. In this article, we discuss mutations in genes involved in epigenetic processes, such as TET2, DNMT3A, and ASXL1 as well as global and gene-specific methylation patterns in neoplastic cells that may occur in association with mastocytosis.

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CONFLICTS OF INTERESTS

The authors declare that they have no conflict of interest.

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