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Histamine is a Biogenic Amine that has Widespread Effects on Cell Types through Activation of Receptors

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INTRODUCTION

Sleep-wake behaviour is a well-studied physiology in pivotal histamine research. Moreover, neuronal histamine release mimics arousal behaviours that exhibit distinct circadian rhythms. However, early stages of histamine-associated knockout mouse studies revealed relatively minor defects in normal sleep-wake control. To reassess the role of histamine in controlling behavioural states, this article summarizes advances in sleep-wake research in histamine-related genetic mouse models and describes the importance of histamine in characteristic aspects of wakeful behaviour. Based on our analysis of recent mouse models, we propose that neuronal histamine may act as an alarm signal in the brain when high attention or strong arousal drives are required. Exploring, defending, learning, or combating hypersomnia. Enhanced histaminergic neurotransmission may support the execution or recognition of signals associated with internal or environmental dangers, such as peripheral histamine from mast cells responding to allergic stimuli and inflammatory signals.

DESCRIPTION

Histamine intolerance is a common disease associated with disorders of histamine metabolism. Despite this, it is often misdiagnosed with other diseases due to the lack of specific clinical symptoms. It was in his early 21st century that histamine intolerance came to prominence. This review focuses on the most recent research on histamine intolerance, including current understanding of its pathogenesis and etiology, as well as the symptoms of histamine intolerance in special populations such as atopic dermatitis and chronic urticaria. Give an overview of the clinical manifestations. In addition, we review modern therapeutic strategies for histamine intolerance and management of specific cases. In the gastrointestinal tract, histamine is present in relatively high concentrations, especially during inflammatory processes. Histamine is a biogenic amine that exerts numerous effects on many cell types through its activation of four different histamine receptors. Produced and released by immune cells such as mast cells and basophils. Some cells, such as dendritic cells and T cells, can express the histamine synthase histidine decarboxylase after stimulation. The same is possible with the human gut microbiome. Although the main source of histamine is food, histamine production by bacteria in the human gut influences immune responses. Histamine's wide-ranging effects on numerous cellular processes lead to a variety of gastrointestinal disorders including, but not limited to, food allergy, histamine intolerance, irritable bowel syndrome, and inflammatory bowel disease. This describes the protective or pathogenic effects of histamine on various intestinal disorders. Histamine as an immunomodulatory autacoid is widespread. The presence of histamine in many tissues where immune responses occur and its release during immune responses lends credence to the idea that histamine's role in immune responses may be important.

CONCLUSION

Histamine is present in relatively high concentrations in the gastrointestinal tract, especially during inflammatory responses. This review article describes the immunomodulatory effects of histamine on various gastrointestinal disorders, including food allergy, scombroid food poisoning, histamine intolerance, irritable bowel syndrome, and inflammatory bowel disease. The effects of histamine on mucosal immune homeostasis. Is clearly dependent on the expression and activity of the four currently known histamine receptors. However, the relative protective or pathogenic effects of histamine on inflammatory processes in the gut are still poorly defined and require further investigation.

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