Clinical, Cosmetic and Investigational Dermatology

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LETTER

L-lysine as an Alternative Treatment for Pityriasis Rosea (PR) [Letter]

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Dear editor

A recent publication discussed the increased occurrence of skin reactions after receiving the COVID-19 vaccine. These manifestations include those caused by the reactivation of latent viruses like human herpesvirus (HHV), such as HHV-6/7 causing pityriasis rosea (PR)[1] as there is a strong association between PR and these viruses as an etiological factor.[2]

During this pandemic, there was a notable focus on HHV-6/7 (Roseovirus, Subfamily Beta). This viral family, in particular HHV-6B, is known to cause the sixth disease, also known as *roseola infantum* or rash. After a prolonged latency period, HHV-6/7 can be reactivated in association with SARS-CoV-2 or following vaccination, resulting in the development of PR, which is characterized by an erythematous papular scaly disease.[3]

Like all HHV, HHV-6/7 establishes lifelong latency, a limited viral genome expression, but is delivered to daughter cells without production of infectious virus. Latency occurs in primary (bone marrow and thymus) and secondary lymphoid tissues (mucosa and skin), specifically in macrophages, although bone marrow progenitor cells and T cells (CD4+), as well as astrocytes, may be other sites.[4]

The main hypothesis is that HHV reactivation is the result of failure of the innate or cell-mediated immune response, triggered by immunological dysregulation induced by specific infectious particles in the vaccine formulation.[5]

In recent years, various treatment options have been proposed to address the clinical manifestations of PR and, given the association between PR and HHV-6/7, antivirals are used.[2]

Systematic reviews have shown that acyclovir is more effective than placebo in controlling skin symptoms and pruritus, promoting remission of PR by suppressing viral replication.[6,7]

It is interesting to note that another group of viruses (HHV-1/2), controlled by antivirals such as acyclovir, also showed positive results with alternative treatment with L-lysine, showing a reduction in the annual number of manifestations and the healing time of lesions. Given this evidence, a case of PR in a child also showed improvement when L-lysine was used in combination with a reduction in foods rich in L-arginine.[8] Two other patients with PR also reported improvements after using the amino acid.[9]

The systematic review of post-vaccine PR cases[1] cites one report of PR following the second dose of AZD1222, which was also controlled with the L-lysine + (L-arginine control) protocol.[3]

As with acyclovir, treatment with L-lysine (3 grams for up to 3 days as a loading dose, followed by 500 mg/day for 30 days) should be initiated at the onset of symptoms for viral control during PR, along with an L-arginine control.[2,3]

Balancing the intake of L-lysine and L-arginine has been used as a therapeutic strategy against viral infections that depend on arginine for viral replication. Lysine inhibits the availability of arginine through competitive antagonism. L-lysine and L-arginine use the same cellular transporters, and lysine also promotes arginine catabolism by increasing renal arginase production. Depletion of arginine impairs viral replication, helping to control the infection.[10,11]

Received: 28 January 2024
Accepted: 8 February 2024
Published: 13 February 2024

Based on these reports, it is suggested that L-Lysine may be a promising therapy for controlling PR. Further investigation in large-scale randomized controlled clinical trials is recommended.

Data Sharing Statement

Data used in the discussion were found in peer-reviewed journals and previously published case reports. Appropriate citations and references are included in the article.

Author Contributions

VABS – conceptualization, bibliographical survey, review and writing of the initial version. MCP – researcher responsible for support in writing and final article review. All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

This letter did not receive funding.

Disclosure

The authors declare no competing interests for this communication.

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https://doi.org/10.2147/CCID.S461722