Carta al editor

Potential benefits of the association of flavonoids with conventional drugs

Beneficios potenciales de los flavonoides asociados con la terapia convencional

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Dear editor:

At present the use of herbal medicine is gaining important spaces within society, especially in countries with higher income indices. In others, with high levels of poverty, it may be the only therapeutic alternative. Tradition and popular wisdom promote its use, which has low cost and easy access.[1,2]

The simultaneous consumption of conventional drugs and products derived from medicinal plants can generate combinations that decrease the effectiveness of treatment or increase the risk of interactions. However, this is not always the case, sometimes they can be beneficial and contribute to the well-being of the patient, in this sense this analysis is directed.

Unlike synthetic drugs, herbal products show a versatility of active ingredients responsible for their pharmacological actions. Among them are flavonoids, under whose classification are a series of secondary metabolites. They are present in fruits and vegetables, although they are not exclusive to them. They report various benefits to human health, mainly related to their antioxidant capacity, which some researchers agree to call "pro-healthy qualities".[3]

One of the phenomena that today threaten adequate therapy is the appearance of drug resistance. Different mechanisms are involved in it, among which the membrane transporters corresponding to the ABC superfamily (ATP binding-cassette) stand out. From a clinical point of view, genetic polymorphism at this level is related to the appearance of conditions such as Alzheimer's, atherosclerosis, and liver diseases, among others. This context makes them attractive targets for drug design. At the same time, they can expel different drugs from the cell making it resistant as described for antitumor, antiretroviral and anticonvulsant agents.[4,5]

The literature shows the capacity for interaction between flavonoids and ABC transporters, either as a substrate or as its inhibitor. This interference has opposite effects and, at the same time, predicts a high therapeutic value. On the one hand, they have adequate mechanisms to avoid multidrug resistance, demonstrated for antitumor treatments. On the other hand, its ability to increase the efficacy of some drugs opens up new possibilities for therapeutic association.[3,5]

It is true that the complexity of the metabolic processes of flavonoids and their way of interacting with ABC transporters can make the interpretation of the results difficult. Likewise, failing to consider the consequences that genetic variability and the polymorphisms to which they are subjected to the effectiveness of pharmacological treatments would be a mistake. However, new research could go the way of associating flavonoids with conventional therapy.

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Conflicto de intereses

Los autores declaran que no existen conflictos de intereses.

Contribución de los autores

Yornaika Llano González: Concepción, búsqueda de información, redacción y revisión del artículo.

Ana Margarita Almeida Uriarte: Concepción, búsqueda de información, redacción y revisión del artículo.

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