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Corresponding author:

yuriquirolaf82@gmail.com

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Selfmedication with sauco blanco: a potential risk of post-chikungunya acute poisoning

Automedicación con saúco blanco: un riesgo potencial de intoxicación aguda post-chikungunya

Jurek Guirola Fuentes ^{1*} , Yaisemys Batista Reyes ¹ , Yailin Morera Galvan ² 

¹ Army Military Hospital "Dr. Mario Muñoz Monroy". Hospitalization Center. Matanzas, Cuba.

² "José Jacinto Milanés" Polyclinic. Matanzas. Cuba.

Dear readers:

Over the past two decades, the chikungunya virus (CHIKV) has affected millions of people in the Americas region. It is an arbovirus from the Flaviviridae family, which causes the infectious disease of the same name, transmitted to humans through the bite of a mosquito infected with the virus.

The acute illness causes, among other symptoms, disability due to symmetrical polyarthralgia that often limits the patient's movement, with fatalities among the sick being uncommon. Research on patient groups has indicated that between 30 % and 50 % of them experience persistent arthralgia over time, and a notable group progresses to an erosive arthritis that is clinically indistinguishable from rheumatoid arthritis. ⁽¹⁾

On the other hand, current pharmacological management is symptomatic and is based on analgesics (acetaminophen), non-steroidal anti-inflammatory drugs, and, in severe cases, corticosteroids or disease-modifying antirheumatic drugs. In addition to this, the affected population self-medicates through the consumption of plant infusions, among them *Sambucus nigra* L. (Adoxaceae), known as elder or black elderberry.

The mentioned plant is a shrub that can reach up to 10 meters in height. The branches contain a distinctive white pith at their center, which is used in various ways. The leaves are arranged in opposite pairs and are pinnate, with 5 to 7 leaflets that are broad and have serrated edges. The flowers are grouped in multifloral corymb-shaped inflorescences, 10 to 24 cm in diameter.

The fruit starts as a red drupe and turns black upon reaching maturity.⁽²⁾

While, as the authors note, the desperation for clinical improvement leads many patients to self-medicate with medicinal plants, it is essential to consider that this practice is not without significant risks. A clear example is elderberry (*Sambucus* spp.), one of the frequently used species. However, or precisely because of its popularity, it is crucial to warn about its potentially toxic components: the leaves, seeds, fruits, and bark of elderberry contain the heteroside sambunigrin, a glycoside that can release cyanide, and which is formed by the r (+)-mandelonitrile-D-glycoside nucleus. In moderate doses, it does not pose a risk, but exceeding the recommended amounts can be the causative agent of acute plant poisoning.

In the authors' opinion, acute plant poisonings are infrequent and complex due to the active principles these plants contain. Furthermore, in the consulted scientific literature, no toxicity research was found indicating the maximum or toxic doses of elderberry.

It is also known that the fruits contain anthocyanosides and hemagglutinins, so it is important to be cautious with the amount of the plant consumed, as these compounds can be cardiotoxic. On the other hand, a review of the article "Antiviral properties of metabolites isolated from terrestrial plants" demonstrates efficacy against the influenza virus.⁽¹⁾

The authors consider that self-medication with plants is frequent if the country's epidemiological situation is taken into account, from which the province is not exempt.

For this reason, the authors alert the health authorities to the potential risk of acute poisoning from the ingestion of elderberry infusion, which is not negligible in patients convalescing from chikungunya. Likewise, it is necessary to mention that the clinical presentation could be complex in children, the elderly, and individuals with comorbidities affecting the cardiovascular system.

Looking ahead, it is essential for the country to implement a prevention strategy aimed at avoiding self-medication with plants in the population.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.