EVALUATION OF THE SAFETY PROFILE OF AÇAÍ (Euterpe Oleracea) EXTRACT IN KERATINOCYTES

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INTRODUCTION: Psoriasis affects approximately 125 million people worldwide. These conditions, similarly, to atopic dermatitis and other diseases, are called psychdermatoses, they affect the skin and are strongly related to emotional factors, such as stress and anxiety. The characteristics of these issues are the chronic inflammatory lesions in the dermis and tend to worsen in contexts of psychological distress. The pathophysiology of psoriasis involves not only autoimmune mechanisms, but also psychosocial influences, which contributes to a vicious cycle. Despite the availability of conventional treatments, such as corticosteroids and immunosuppressants, the adverse effects associated with these therapies encourage the investigation of new alternatives. That is the reason why natural products with biological properties have been studied, such as açaí (*Euterpe oleracea*), which has demonstrated antioxidant and anti-inflammatory potential in several studies. OBJECTIVE: This study aims to evaluate the *in vitro* safety profile of açaí extract in HaCaT cells (human keratinocytes). MATERIALS AND METHODS: HaCaT cells were exposed to different concentrations of açaí extract (0.001-250 µg/mL) for 24h, 48h and 72h. Then, the cells were evaluated for cell viability and proliferation, nitric oxide (NO) production, reactive oxygen species (ROS) levels and extracellular dsDNA release. RESULTS: Most of the concentrations of açaí extract presented a very positive safety profile since the results obtained were similar to the negative control. From 0.001 until 100 µg/mL, açaí extract did not cause changes in cellular viability and proliferation, as well as nonsignificant increases in oxidative parameters were found. However, 250 µg/mL of açaí extract decreased cellular proliferation index and slighly increased NO levels compared to untreated cells. CONCLUSION: The obtained results suggest that açaí extract is a nontoxic natural health product and could be further explored for cellular healing potential.

KEYWORDS: Natural health products; Cytotoxicity; Cellular homeostasis.

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