عنوان مقاله:

Ultraviolet B efficacy in improving antileishmanial effects of silver nanoparticles

محل انتشار:

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خلاصه مقاله:

Objective(s):Cutaneous Leishmaniasis (CL) is a parasitic disease caused by various species of the flagellated protozoan, Leishmania. Regardless of the numerous studies, there are still serious challenges in the treatment of CL. This study aimed at evaluating the influence of a low dose ultraviolet B (UVB) radiation along with silver nanoparticles (AgNPs) on a mouse model of CL induced by Leishmania major[m١] . Materials and Methods: L. major promastigotes (MRHO/IR/٧۵/ER) were extracted from infected mice spleens. Two months after subcutaneous injection of ٢×١٠۶ promastigotes into the footpad of BALB/c mice, when the lesions were developed, the animals were divided into ۴ groups including one control group and three study groups: AgNPs, UVB and UVB plus AgNPs. Spleen parasite burden was assessed on day ۴٠ after the first treatment. The data were analyzed by Instat, Elidaand SPSS١۶ software programs. Results: The results showed the highest pronounced inhibitory effect in the group receiving AgNPs plus UVB. In addition, a significant difference was obtained between the group receiving AgNPs alone and the one with combinational therapy. The findings on parasite burden showed a significant difference between the control group and other treatment groups. Conclusion:It could be suggested that UVB in the presence of AgNPs, by inhibiting the spread .of CL lesions and reducing the rate of visceral progression of the disease, provides a serious anti-leishmanial effect

کلمات کلیدی:

Cutaneous Leishmaniasis, Leishmania major, Nanosilver, Parasite Burden, Phototherapy, Ultraviolet B