

عنوان مقاله:

THE INHIBITORY EFFECTS OF 3 IRANIAN HONEYS IN PREVENTING TISSUE DAMAGE CAUSED BY ASPERGILLUS FUMIGATUS IN BALB/C MICE

محل انتشار:

نوزدهمین کنگره بین المللی میکروب شناسی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Background and Aim: Occurrence of Invasive Aspergillosis (IA) has increased significantly in recent years. Although lung is the main site of aspergillosis, Aspergillus fungi can spread to other organs and cause thrombosis, hemorrhage and necrosis. Honey is a natural product with antioxidant, anti-inflammatory, immunomodulatory and antimicrobial properties. This study was designed to determine the effect of 3 Iranian honeys in prevention of tissue invasion in mice involved with invasive aspergillosis. **Methods:** 100 male BALB/c mice were divided into 10 groups including honey, honey/infection and negative and positive controls. Honey was administered orally (1gr/kg BW) for 10 days. On day six, mice were infected with Aspergillus fumigatus conidia (1×10^6 /IV). On day 11, mice were euthanized and histopathological samples and tissue culture were prepared. Five mice from each group were kept for 30 days to determine survival rate. **Results:** Findings showed that there were no histopathological changes in honey recipients alone. The highest rate of fungal contamination was in kidneys, and the honey/infection mice had a significant decrease in CFU/gr in comparison to the infectious group. Survival rates were also higher for Pennyroyal/Licorice and mixed honey recipient mice ($p < 0/05$). **Conclusion:** according to our results honey can be used as an inhibitor of adverse effects of Aspergillus fumigatus on different tissues. In addition, honey consumption could prevent the invasion of fungi into different tissues and increases the survival rate. However, further studies are needed to .determine the mechanism of action, most effective dosage and the exact active compounds of honey

کلمات کلیدی:

Invasive Aspergillosis, honey, histopathology, mice

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