عنوان مقاله:

Determination of Type and Molecular Identity of Clostridium perfringens Isolated from Patients with Multiple Sclerosis ((MS

محل انتشار:

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خلاصه مقاله:

Background & Objectives: Multiple sclerosis (MS) is a chronic inflammatory autoimmune disease of the central nervous system (CNS). Clostridium perfringens ε-toxin (ETX) can cause emerging complications of MS due to its tendency to the blood-brain barrier. This study aimed to determine the presence of toxin-producing genes in intestinal C.perfringens in patients with multiple sclerosis. Materials & Methods: Stool samples were taken from ۷۰ MS patients and ۷۰ without MS individuals. The samples were enriched in cooked meat media, and cultural and biochemical methods separated Clostridium isolates. PCR tested these isolates to identify C. perfringens species. In addition, the presence of alpha, beta, epsilon and iota toxin-producing genes was evaluated in all isolates by Multiplex PCR. Results: Isolates containing the etx gene were observed in ۱۰ patients, while no itxA gene was identified in any isolates. The results showed that isolates in ۸ patients were type D. Also, the gene encoding toxin type D was identified in ۲ isolates obtained from the control group. Conclusion: Our findings indicated the high frequency of C. Perfringens in MS patients. In the studied samples with clinical presentations, most of these organisms were type D bacteria that produce ε-toxin.

کلمات کلیدی:

Clostridium perfringence, ε-toxin, multiple sclerosis, toxin-producing genes