

## Co-occurrence of multiple sclerosis and myasthenia gravis: A case report and review of immunological theories

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### Abstract

Autoimmune mechanisms are implicated in both myasthenia gravis (MG) and multiple sclerosis (MS), and hypothesis of a common immunological mechanism of pathogenesis is supported by the fact that this rare combination of the two diseases occurs more frequently than expected by random association. Although MS is primarily mediated by T lymphocytes and MG primarily involves the destruction of the neuromuscular junction by antibodies, there are evidences that support both cell-mediated and humoral immunity are involved in the pathogenesis of both diseases. Different studies have shown dysfunction of T cells as well as B cells involved in the pathogenesis of both disorders. Previous case reports, mainly present female patients who had a mild presentation of MG, either prior or after diagnosis of MS. In this article, in addition to presenting a unique male patient with a previous diagnosis of MS, who presented with MG crisis, we aimed to review the literature to find the common immunological mechanisms involved in the pathogenesis of MG and MS.



### Biography

Sara Dehbashi obtained her medical degree in Shiraz, Iran. She started her medical experience in United States as a research fellow in Washington University in St. Louis working in an immunology lab. She completed her neurology residency training in University of Texas Medical Branch and MD Anderson Cancer center, and her Fellowship in Neuromuscular Medicine in Icahn School of medicine at Mount Sinai in New York. She is currently working as Assistant Professor of neurology in Thomas Jefferson University, and is enthusiastic about teaching medical students, residents, fellows, and research in addition to her clinical duties.

### Publication

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