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Multiple Sclerosis: A Raging Disease

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Review Article

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ABSTRACT

Multiple sclerosis (MS) affects the brain and neural structure. Early MS symptoms comprise weakness, tingling, numbness, and blurred vision. Alternative signs include muscle stiffness, thinking issues, and urinary issues. Treatment will relieve MS symptoms and detain disease progression. MS involves inculcate an immune-mediated method within which an abnormal response of the body's system is charged against the central system (CNS), that is created of the brain, neural structure and optic nerves. The precise substance – or target that the immune cells are supersensitive to attack – remains unknown, that is why MS is taken into account by several specialists to be "immune-mediated" instead of "autoimmune." The reason behind MS remains unknown – scientists assume the disease is triggered by as-yet-unidentified environmental element in someone who is genetically susceptible to respond.

INTRODUCTION

Multiple Sclerosis (MS) is one of the chronic inflammatory demyelinating disease of central nervous system (CNS), represented by medulla destruction, loss of oligodendrocytes, damage of nerve fibre and astrogliosis [1-5]. It is an autoimmune disease of the system. It ends up in neurological impairments that vary from sensory defects to difficulties in movement and dysfunction. The reason behind MS remains unknown, though infective agent, environmental, and genetic factors are projected to contribute to its development [6,7]. In recent years, increasing confirmation has pointed to the significant role of fibrinolysis within the pathogenesis of MS. Specially the characteristic inflammation, focal degenerative disorder, and nerve fibre degeneration in MS occurring once disruption of the blood brain barrier (BBB) and entry of blood serum proteins, together with coagulation factor, into the system [8-10]. it's the foremost common neurological disease among young adults within which ladies area affected twice as of men. The pathologic process of MS involve multiple factors together with genetic predisposition, environmental factors, immune dysregulation, and infective agent infections [11,12]. The breakdown of immune tolerance to self-antigens in genetically vulnerable people is assumed to be a key event for the development of MS [13-15].

SIGN AND SYMPTOMS

A person suffering with MS will have neurological symptom or sign, with involuntary, visual, motor, and sensory issues being the foremost common [16]. The precise symptoms are determined by the locations of the lesions in the nervous system, and will embody loss of sensitivity or changes in sensation admire tingling, pins and needles or insensibility, muscle weakness, terribly pronounced reflexes, muscle spasms, or problem in moving; difficulties with coordination and balance (ataxia); issues with speech or swallowing, visual issues (nyctagmus, optic neuritis or double vision), feeling tired [17-20], acute or chronic pain, and bladder and gut difficulties, among others. Difficulties thinking and emotional issues like depression or unstable mood are most common. Uhthoff's phenomenon, a worsening of symptoms results because of exposure more than the usual temperatures, and Lhermitte's sign, an electrical sensation that runs down theback once bending the neck [21-25].

The condition initiates within 85% of cases as a clinically isolated syndrome (CIS) over variety of days with 45% having motor or sensory issues [26,27], 20% suffering from having optic neuritis, and 10% having symptoms closed to brainstem dysfunction, whereas the remaining 25% have quite one among the previous difficulties [28]. The

2. Karti O, et al. The Evaluation of Choroidal Vascular Changes Associated with Vascular Dysregulation in Patients with Multiple Sclerosis Using Enhanced Depth Imaging Optical Coherence Tomography. *J Clin Exp Ophthalmol.* 2016;7:534.
3. Caprio MG, et al. Vascular Disease in Patients with Multiple Sclerosis: A Review. *J Vasc Med Surg.* 2016;4:259.
4. Douglas JN, et al. Antibodies to the RNA Binding Protein Heterogeneous Nuclear Ribonucleoprotein A1 Colocalize to Stress Granules Resulting in Altered RNA and Protein Levels in a Model of Neurodegeneration in Multiple Sclerosis. *J Clin Cell Immunol.* 2016;7:402.
5. Sjakste T, et al. Disease-Specific and Common HLA and Non-HLA Genetic Markers in Susceptibility to Rheumatoid Arthritis, Type 1 Diabetes Mellitus and Multiple Sclerosis. *J Mol Genet Med.* 2014;8:119.
6. Canavan PK. Evidence Based Therapeutic Exercise Recommendations for Patients with Multiple Sclerosis: A Physical Therapy Approach. *J Gerontol Geriatr Res.* 2016;5:271.
7. Massot C, et al. Back Pain and Musculoskeletal Disorders in Multiple Sclerosis. *J Spine.* 2016; 5: 285.
8. Gambuzza ME, et al. A New Era for Immunotherapeutic Approaches in Multiple Sclerosis Treatment. *J Clin Trials.* 2016;6:253.
9. Opara JA, et al. Palliative Care in Polish Patients with Multiple Sclerosis. *J Palliat Care Med.* 2016;6:245.
10. Elpers C et al. Prediction of Multiple Sclerosis after Childhood Isolated Optic Neuritis. *Int J Pediatr Neurosci.* 2016; 1: 103.
11. Granella F et al. Eligibility Criteria to Natalizumab Therapy in Patients with Relapsing-remitting Multiple Sclerosis: A Real-life Study in an Italian Population-based Cohort. *J Clin Case Rep.* 2015; 5: 649.
12. Rima R. A Cohort Study of Cognitive Impairment in Patients of Multiple Sclerosis. *J Mult Scler (Foster City).* 2015;2:161.
13. Haq E et al. Multiple Sclerosis and Gene Polymorphisms: are we Groping in the Dark? *J Mult Scler (Foster City).* 2015;2:162.
14. Totaro R. Cognitive Rehabilitation in Multiple Sclerosis. *Int J Neurorehabilitation.* 2015;2:e116.
15. Pedriali M and Zamboni P. The Pathology of the Internal Jugular Vein Wall in Multiple Sclerosis. *J Mult Scler (Foster City).* 2015;2:160.
16. Lucassen EB. Treatment of Multiple Sclerosis in Switzerland and the United States: What can be Learned from our Differences? *J Mult Scler (Foster City).* 2015;2:e107.
17. Okuda B. Useless Hand Syndrome and Astereognosis in Multiple Sclerosis. *J Mult Scler (Foster City).* 2015;2:159.
18. de Ceuninck A, et al. Multiple Sclerosis and Work: An Interpretative Phenomenological Analysis of the Perspective of Persons with Early Stage MS. *J Mult Scler (Foster City).* 2015;2:158.
19. Mekers WFT, et al. Introduction of Planaria as a New Model for Multiple Sclerosis Research: Evidence from Behavioural Differences in Cuprizone Treated Planaria Exposed to Patterned Magnetic Fields. *J Mult Scler (Foster City).* 2015;2:156.
20. Rima R. A Rare Case of Familial Multiple Sclerosis. *J Neurol Disord.* 2015,S1:006.
21. Ongagna JC et al. Tolerance and Efficacy of Fampyra® in Real-Life Cohort of Patients with Multiple Sclerosis. *J Clin Cell Immunol.* 2015; 6: 355.
22. Yfantopoulos J, et al. Health and Economic Impact of Relapsing Forms of Multiple Sclerosis in Greece: The Storms Study. *Pharmacoeconomics.* 2015;1:102.
23. Naziha K, et al. Gougerot Sjögren Syndrome Mimicking Multiple Sclerosis. *J Arthritis.* 2015;4:175.
24. Aharoni R. Animal Models of Multiple Sclerosis: Imperfect but Imperative. *J Mult Scler (Foster City).* 2015;2:e106.
25. Ben Ali N, et al. Can We Speak About A Psychiatric Attack During A Multiple Sclerosis?. *J Mol Biomark Diagn.* 2015;5:237.
26. Maulucci F et al. Sustained Disease-Activity- Free Status in a Woman with Relapsing-Remitting Multiple Sclerosis Treated with Antiretroviral Therapy for Human Immunodeficiency Virus Type 1 Infection. *J Mult Scler (Foster City).* 2015; 2: 152.
27. Maulucci F, et al. Sustained Disease-Activity- Free Status in a Woman with Relapsing-Remitting Multiple Sclerosis Treated with Antiretroviral Therapy for Human Immunodeficiency Virus Type 1 Infection. *J Mult Scler (Foster City).* 2015;2:152.

28. Abi Chahine NH, et al. Treatment of Long Standing Multiple Sclerosis with Regentime Stem Cell Technique. 2015.
29. Gambuzza ME, et al. A Toll-Like Receptor 3-Agonist as Promising Candidate in Multiple Sclerosis Treatment. *J Clin Cell Immunol.* 2015;6:339.
30. David G Haegert. The Definition of Multiple Sclerosis: Implications for Research. *J Mult Scler (Foster City).* 2015;2:e105.
31. Tal S. MRI Directional Diffusivity Values of Cervical Cord White Matter: Multiple Sclerosis Patients vs. Healthy Controls. *J Spine.* 2015;4:246.
32. Capobianco M, et al. Cyclophosphamide Pulses Therapy after Natalizumab Discontinuation for Multiple Sclerosis: A Multicentre Study. *J Mult Scler (Foster City).* 2015;2:151.
33. Niwald M, et al. Understanding and Treating Cognitive Function Deficits in Multiple Sclerosis. *J Nov Physiother.* 2015;5:139.
34. Zaghoul MZ. Chlamydomyces Pneumonia. *Air Water Borne Diseases.* 2015;4:e134.
35. Motamedi MHK and Danial Z. Multiple Sclerosis: The Status Quo. *J Mult Scler (Foster City).* 2015;2:e104.
36. Oreja-Guevara C, et al. Observational Safety Study of THC: CBD Oromucosal Spray (Sativex) in Multiple Sclerosis Patients with Spasticity. *Clin Exp Pharmacol.* 2015;5:184.
37. Pahan K. Prospects of Cinnamon in Multiple Sclerosis. *J Mult Scler (Foster City).* 2015;2:149.
38. Rabadi MH. Comparison of the Kurtzke Expanded Disability Status Scale and the Functional Independence Measure: Measures of Multiple Sclerosis Related Disability. *Int J Phys Med Rehabil.* 2015;3:285.
39. Gallien P, et al. Interest of Botulinum Toxin for Treatment of Spasticity in Multiple Sclerosis. *J Mult Scler (Foster City).* 2015;2:148.
40. Mehrangiz EM, et al. A Case Control Study: Vitamin D Status and Sun Exposure in Multiple Sclerosis . *J Mult Scler (Foster City).* 2015;2:147.
41. Kruger PG. Are Mast Cells the Key to Multiple Sclerosis? *J Mult Scler (Foster City).* 2015;2:146.
42. Perusquía-Ortega E, et al. A Therapeutic Trial of Bioequivalence Between Two Interferons Beta – 1a for Treating Relapsing – Remitting Multiple Sclerosis. *J Mult Scler (Foster City).* 2015;2:145.
43. Ali NB, et al. Neurobehavioral Aspects of Different Forms of Multiple Sclerosis . *J Neurol Neurophysiol.* 2015;6:293.
44. Geldenhuys S, et al. UV Irradiation of Skin Regulates a Murine Model of Multiple Sclerosis. *J Mult Scler (Foster City).* 2015;2:144.
45. Ben-Zacharia AB. Screening for Depression in Adult Patients with Multiple Sclerosis. *J Mult Scler.* 2015;2:140.
46. Rasia S, et al. Natalizumab to Fingolimod Switching in Multiple Sclerosis: Results from a “Real Word” Retrospective Analysis. *J Mult Scler.* 2015;2:142.
47. Habib J, et al. Blood B Cell and Regulatory Subset Content in Multiple Sclerosis Patients. *J Mult Scler.* 2015; 2:139.
48. Hegazi AG, et al. Novel Therapeutic Modality Employing Apitherapy for Controlling of Multiple Sclerosis. *J Clin Cell Immunol.* 2015;6:299.
49. Balnate R, et al. Associations of HLA DRB1 Alleles with Igg Oligoclonal Bands and Their Influence on Multiple Sclerosis Course and Disability Status. *J Neurol Neurophysiol.* 2015;6:268.
50. Baig AM. Mitochondrial DNA Mutation in Microglia Can Be Treated by SCNT Cloning and Not by Reprogramming of Olfactory Ensheathing Cells in the Multiple Sclerosis Treatment. *J Mult Scler.* 2015;2:132.
51. Sinha S and Karandikar NJ. Multiparameter Flow Cytometric Assays to Quantify Effector and Regulatory T-Cell Function in Multiple Sclerosis. *J Mult Scler.* 2014;2:130.
52. Bak TH, et al. Impairment of Visual Cognition in Progressive Multiple Sclerosis. *J Mult Scler.* 2014;1:129.
53. Bifulco M and Malfitano AM. Advances in Flow Cytometry Investigation of Cannabinoid CB2 Receptor Agonists in Multiple Sclerosis: Commentary. *J Mult Scler.* 2014;1:128.
54. Laing CM, et al. Anger, Quality of Life and Mood in Multiple Sclerosis. *J Mult Scler.* 2014;1:127.
55. Gudesblatt M, et al. Outcomes of a Switch to Fingolimod to Treat Relapsing Multiple Sclerosis: A Patient Subgroup Post Hoc Analysis. *J Mult Scler.* 2014;1:123.
56. Nelson F, et al. Association of Multiple Sclerosis Related Cognitive Impairment with an MRI-Derived Composite Score. *J Mult Scler.* 2014;1:124.

