

5th Annual European Pharma Congress

July 18-20, 2016 Berlin, Germany

T-VDMS- therapeutic potential of vitamin D3 as an add on to interferon beta in patients with multiple sclerosis in Sulaimaniyah, KRG-Iraq

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Background & Objective: Treatment of Multiple Sclerosis (MS) has received substantial attention due to devastating symptoms, disability progression, mental health and cost of polytherapy. The objective of the study is to investigate the effect of vitamin D supplementation as an add on to interferon beta on immunological, biochemical, radiological and clinical outcomes.

Patients & Methods: Double-blinded, placebo-controlled, randomized study was conducted in 54 MS patients on interferon beta at MS Center in Sulaimaniyah City, KRG-Iraq. Total of 43 patients had completed the study. On vitamin D3 arm 13 patients received 10000 IU/day, 14 patients received 5000IU/day and on placebo arm 16 patients treated with placebo. Serum cytokines IL-2 and TGF- β_1 were measured. Modified Fatigue Impact Scale, cognition (MFIS), Expanded Disability Status Scale (EDSS), 9-hole peg test, 25-foot walk, lesion numbers at T2 and T1 enhancing lesion, brain atrophy, relapse occurrences were assessed twice for every patient at baseline and after six months of treatment.

Results: After six months of treatment; serum vitamin D level significantly increased MFIS, EDSS and cognition function improved significantly, relapse rate reduced very significantly, TGF- β_1 serum level increased, IL-2 level and MS Functional Composite changed but not significantly, Gadolinium-enhancing lesions reduced significantly compared to placebo.

Conclusions: Vitamin D deficiency is considered as both risk factor and consequences of MS. The optimum serum vitamin D level (40ng/ml) can be achieved faster by 10000IU vitamin D3/daily which can be considered as a loading dose, also favored for prevention of relapse occurrences this level can be maintained by 5000IU vitamin D3/daily and keeping its therapeutic potential without causing hypercalcemia.

Biography

Lanja Ibrahim Saeed recently graduated from Master Degree, she is currently in charge of Multiple sclerosis pharmacy at Multiple Sclerosis Center at Shar Hospital of Sulaimaniyah. Lanja Ibrahim Saeed received her B.Sc in pharmacy and M.Sc in Clinical Pharmacology from the College of Pharmacy University of Sulaimani. She has 12 months of experience in Hospital as clinical pharmacist / 2 years of experience in hospital pharmacy management and 5 years of experience in Pharmacy practice and Community pharmacy. She is a member of the Syndicate of Iraqi Pharmacists and Kurdistan Pharmacists Associations.

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