Acta Neurol Belg. 2016 Dec;116(4):439-443. Epub 2016 Jul 25.

MtDNA T4216C variation in multiple sclerosis: a systematic review and meta-analysis.

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Abstract

MtDNA T4216C variation has frequently been investigated in Multiple Sclerosis (MS) patients; nonetheless, controversy has existed about the evidence of association of this variation with susceptibility to MS. The present systematic review and meta-analysis converge the results of the preceding publications, pertaining to association of mtDNA T4216C variation with susceptibility to MS, into a common conclusion. A computerized literature search in English was carried out to retrieve relevant publications from which required data were extracted. Using a fixed effect model, pooled odds ratio (OR), 95 % confidence interval (95 % CI), and P value were calculated for association of mtDNA T4216C variation with susceptibility to MS. The pooled results showed that there was a significant association between mtDNA T4216C variation and MS (OR = 1.38, 95 % CI = 1.13-1.67, P = 0.001). The present systematic review and meta-analysis suggest that mtDNA T4216C variation is a contributory factor in susceptibility to MS.

KEYWORDS: MS; Meta-analysis; Mitochondrial DNA; Multiple Sclerosis; Systematic review; T4216C; Variation; mtDNA

PMID: 27457485
DOI: 10.1007/s13760-016-0675-5
[Indexed for MEDLINE]