

## WHITE MATTER HYPERINTENSITIES ARE AN INDEPENDENT PREDICTOR OF FUTURE DEPRESSIVE DISORDERS: 3-YEAR RESULTS FROM EPIDEMIOLOGICAL STUDY OF VASCULAR DEPRESSION IN KOREAN ELDERLY

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**Objectives:** The purposes of this study were to estimate the prevalence rates of subtypes of late life depression (LLD) including (vascular depression and non-vascular depression) in the baseline study, to examine the natural course of LLD and to investigate influence of white matter hyperintensities (WMH) volume on depression and neurocognitive function in the 3-year follow-up study.

**Methods:** WMH was rated by the modified Fazekas scale and the volume of WMH was also calculated by an automated quantification method. Patients were classified as having vascular depression if they suffered from any type of depressive disorders and had a score of 2 or more on either deep white matter hyperintensity or subcortical gray matter ratings. In the 3-year follow-up study, the participants of the in the baseline were follow-uped with the same methodology of the baseline study.

**Results:** The prevalence rates of vascular major depressive disorder (MDD) and vascular non-major depressive disorder (nMDD) were 2.39% (53.6% of MDD) and 4.24% (34.0% of nMDD), respectively, in the baseline study. Among non-depressive group in the baseline study, subjects with WMH(+) had 13.5 times (OR=13.5, 95% CI=1.10-165.97) risk of developing depressive disorder in the 3-year follow-up study, as compared to those without WMH(+). Log WMH volume (OR=5.78, 95% CI=1.04-31.72) in the baseline study was an independent predictor for depressive disorder in the 3-year follow-up study

**Conclusion:** WMH is a crucial predictor for future depressive disorder, which supports the previous vascular depression hypothesis. Vascular depression is a useful construct accounting for clinical characteristics of LLD.