

Results: 437516 persons involved in STAs were enrolled for analyses and the mean age was 61.47 years (SD=8.90) with sex ratio (F/M) of 0.62. We divided the samples into three groups: (1) STAs without dementias (95.17%) (2) dementias after STAs (3.40%), and (3) dementias before STAs (1.43%). The mean age of the 3rd group (73.80 years, SD=8.79) was significantly older than the rest two. When comparing these three groups, a preceded dementia diagnosis was a significant risk factor for repeated STAs. (OR: 1.205, 95% CI: 1.100-1.320, $p < 0.001$) Finally, an average length of 2.35 years (SD: 1.60) was found for those who was diagnosed of dementias before the first STA while 2.57 years (SD: 1.69) was noted for the diagnosis of dementia after first STA.

Conclusion: In our study, dementia was identified as a significant risk factor for STAs. We further asserted that 2.5 years would be an appropriate time length for the authorities to examine the traffic risks of those who were diagnosed of dementias.

P204: Heart rate variability in patients with dementia or neurocognitive disorders: A systematic review and meta-analysis

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Objective: Heart rate variability (HRV), a quantitative measure of mainly parasympathetic activity, has been applied in evaluating many types of psychiatric and neurological disorders, including dementia (or neurocognitive disorders). However, although dementia patients often showed significantly lower HRV (various indices) than healthy controls, and different types of dementia had distinct HRV features, the results were not identical across studies. We designed a systematic review and meta-analysis for incorporating data from different studies.

Methods: We gathered studies comparing HRV in patients with dementia and in healthy controls. HRV was analysed in several ways: parasympathetic function in hierarchical order (main analysis); total variability; comparison of HRV between different subtypes of dementia; specific indices of HRV; HRV reactivity.

Results: In initial search, we found 3425 relevant articles; 24 studies with a total of 1107 dementia patients and 1017 control participants finally entered the meta-analysis. The dementia patients had a significantly lower resting HRV for parasympathetic function (Hedges' $g = -0.3596$, $p = 0.0002$) and total variability (Hedges' $g = -0.3059$, $p = 0.0002$) than the controls. For diagnostic subgroup analysis relative to the controls, HRV was significantly lower in mild cognitive impairment (MCI) patients (Hedges' $g = -0.3060$) and in patients with dementia with Lewy bodies (DLB) (Hedges' $g = -1.4154$, $p < 0.0001$). Relative to patients with Alzheimer's disease, HRV in patients with DLB was significantly lower (Hedges' $g = -1.5465$, $p = 0.0381$). Meta-regression revealed that gender proportion was significantly associated with effect size.

Conclusion: Our results support that dementia (especially DLB and MCI) patients to have lower parasympathetic activity than health people. The influence of gender on the results should be carefully interpreted.