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**Online supplemental data**

Panel A

![Diagram showing relationships between Virchow-Robin spaces, CFPWV, and GDS-15 score.](image)

Adjusted for potential confounders:

\[ \beta = 0.096 \pm 0.005 \]

Additionally adjusted for Virchow-Robin spaces:

\[ \beta = 0.095 \pm 0.004 \]

Panel B

![Diagram showing relationships between cerebral microbleeds, CFPWV, and GDS-15 score.](image)

Adjusted for potential confounders:

\[ \beta = 0.096 \pm 0.005 \]

Additionally adjusted for cerebral microbleeds:

\[ \beta = 0.095 \pm 0.004 \]

Panel C

![Diagram showing relationships between lower brain parenchyma volume, CFPWV, and GDS-15 score.](image)

Adjusted for potential confounders:

\[ \beta = 0.096 \pm 0.005 \]

Additionally adjusted for lower brain parenchyma volume:

\[ \beta = 0.098 \pm 0.006 \]

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Figure S1. Association between carotid-femoral pulse wave velocity (CFPWV) and 15-item Geriatric Depression Scale (GDS-15) score and the explained effects of this association by Virchow-Robin spaces (panel A), cerebral microbleeds (panel B) and lower total brain parenchyma volume (panel C).

Solid lines indicate statistically significant associations; dashed lines indicate statistically significant associations. Associations are given as regression coefficients ($\beta$) or odds ratios (ORs), and corresponding 95% confidence intervals. CFPWV is indicated per higher standard deviation (SD) and total brain parenchyma volume per lower SD.

All associations are adjusted for age, sex, education level, smoking, digit symbol substitution test score, gait speed, body mass index, diabetes, mean arterial pressure, heart rate, coronary calcium score and use of anti-hypertensive medication.

Table S1. Explained effects of white matter hyperintensity volume, subcortical infarcts, Virchow-Robin spaces, cerebral microbleeds and lower total brain parenchyma volume of the association between carotid-femoral pulse wave velocity and GDS-15 score – analyses done after exclusion of individuals with stroke (n=223)

<table>
<thead>
<tr>
<th>Manifestations of cerebral small vessel disease</th>
<th>$\beta$</th>
<th>95% CI</th>
<th>%b</th>
</tr>
</thead>
<tbody>
<tr>
<td>White matter hyperintensity volume (per +1 SD)</td>
<td>0.005</td>
<td>-0.001; 0.016</td>
<td>6%</td>
</tr>
<tr>
<td>Subcortical infarcts</td>
<td>0.008</td>
<td>0.002; 0.020</td>
<td>10%</td>
</tr>
<tr>
<td>Virchow-Robin spaces</td>
<td>0.001</td>
<td>-0.004; 0.006</td>
<td>1%</td>
</tr>
<tr>
<td>Cerebral microbleeds</td>
<td>0.000</td>
<td>-0.002; 0.006</td>
<td>1%</td>
</tr>
<tr>
<td>Lower total brain parenchyma volume (per -1 SD)</td>
<td>-0.001</td>
<td>-0.009; 0.003</td>
<td>-1%</td>
</tr>
</tbody>
</table>

*a* All associations adjusted for age, sex, education level, smoking, digit symbol substitution test score, gait speed, body mass index, diabetes, mean arterial pressure, heart rate, coronary calcium score and use of anti-hypertensive medication.

*b* Percentages indicate the magnitude of the explained effect relative to the total direct effect between carotid-femoral pulse wave velocity and GDS-15 score.

Abbreviations: GDS-15: 15-item geriatric depression scale, CI: confidence interval, SD: standard deviation.