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## Cerebrovascular disease associated with Parkinson's disease in Moldovan cohort study

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### Abstract

**Background:** Parkinson's disease (PD) is frequently associated with brain vascular lesions (BVLs), which may influence the severity of the disease.

**Material and methods:** BVLs on MRI were determined in 78.4% of 111 consecutive PD patients (mean age  $64.87 \pm 7.69$  y.o.; disease duration  $50.21 \pm 38.61$  mo.; 48 women (43.2%), 63 men (56.8%)).

**Results:** White matter lesions were present in 73 patients (p.) (65.77%): 61p. (54.95%) – deep white matter, 46p. (41.44%) – periventricular white matter, and 41p. (36.94%) – both locations. Lacunas were determined in 19p. (17.12%), cerebral fissures deepening – 52p. (46.85 %), perivascular spaces dilation – 34p. (30.63%), ventricular system dilation – 29p. (26.13%). Patients with and without BVLs had similar ages, ages at PD onset and disease duration. They had insignificantly higher Beck ( $7.26 \pm 5.62$  vs  $6.86 \pm 4.34$ ), PDQ39 (Parkinson's Disease Questionnaire) ( $59.71 \pm 20.38$  vs  $51.94 \pm 27.69$ ) and NMS (Non-Motor Symptoms) ( $75.06 \pm 45.21$  vs  $71.67 \pm 26.35$ ) scores; and lower MoCA (Montreal Cognitive Assessment) scores ( $21.92 \pm 4.25$  vs  $22.38 \pm 4.57$ ). QRISK3 scores ( $19.68 \pm 16.16$  vs  $12.90 \pm 6.58$ ) and levodopa equivalent daily dose ( $639.98 \pm 223.05$  vs.  $439.69 \pm 404.87$ ) were significantly higher in patients with BVLs.

**Conclusions:** Brain vascular lesions were common in our PD patients, and were associated with higher QRISK3 scores and higher levodopa equivalent daily dose, suggesting more disease severity.

**Key words:** Parkinson's disease, brain vascular lesions

### Cite this article

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