Table 1. Characteristics of the included studies

Study	Participants	Comparison	Follow-up	Outcome measures	Comments
Colledge (2002)	Subjects over the age of 65 with and without dizziness <u>N at baseline</u> Cases: 125 Controls: 86 <u>Age, mean (SD) - % female</u> Cases: 76 (6) - 51% Controls: 76 (5) - 60%	Cases: people > 65 years experiencing dizziness (suffering from dizziness for 3 months or more) Controls: people > 65 years who had never been dizzy	n.a.	Brain MRI findings; Cerebral atrophy, White matter lesions (extensive white matter lesions, mid brain white matter lesions)	All participants had at least one structural abnormality **"***A history of smoking, ischaemic heart disease, stroke, ear disease, and eye disease was significantly more common in dizzy subjects than the controls. Dizzy subjects were more likely to be taking diuretics, calcium antagonists, and aspirin*"
Demain (2013)	People with and without higher level gait disorders with no evidence of rheumatological, orthopaedic or neurological disease that could explains the signs. <u>N at baseline</u> Cases: 20 Controls: 20	Cases: patients diagnosed with higher-level gait disorders during 4-year prospective follow-up Controls: age-matched controls (not clear where these patients were recruited)	n.a.	Brain MRI findings (available for 16 cases and 16 controls)	12/20 cases had cardiovascular risk factors, and 9/20 controls It was stated that: "*ten patients were finally excluded because they developed PD (n = 2), multiple system atrophy (MSA) (n = 3), progressive supranuclear palsy (PSP) (n = 1), frontotemporal dementia (n = 1), cerebellar ataxia (n = 2) or vascular parkinsonism (n = 1)*" - Not clear if these patients were cases or controls

	Age, mean (SD) - % female Cases: 77 (6.8) - 45% Controls: 76 (6.6) - 50%				
Franch (2009)	People older than 65 years of age with gait disorders of unknown cause, and controls Patients were identified based on the following criteria: 1) the patient complained of difficulty in walking; 2) there was evidence of impaired gait on neurologic examination; and 3) no cause of difficulty in walking was found after a general medical Examination and a complete neurologic examination. Patients were excluded if their gait disorder could be attributed to cerebellar disease, pyramidal or extrapyramidal syndromes, cognitive impairment, definable central nervous degenerative disorder, stroke, brain or spinal injury, neuromuscular disease, orthopedic limitations, or major cardiac or respiratory disease or other general conditions that would cause gait disorder N at baseline Cases: 30	Cases: people older than 65 years of age with gait disorders of unknown cause Control: age- and sex matched controls	n.a.	Brain MRI findings; white matter signal hyperintensities in different brain regions and total scores. *Periventricular* *Lobar white matter* *Basal ganglia* *Infratentorial*	All patients underwent the same extensive quantitative test battery. Signal hyperintensity was scored on the Scheltens scale, an instrument that provides 4 sum scores for periventricular hyperintensities, lobar white matter hyperintensities, basal ganglia hyperintensities, infratentorial signal hyperintensities

	Controls: 30 <u>Age mean (SD) - % female</u> Cases: 79.6 (6.1) – 50% Control: 77.2 (4.1) – 50% <u>History of arterial hypertension, n</u> Cases: 18 (60%) Controls: 8 (27%) <u>History of anti-hypertensive drugs, n</u> Cases: 13 (43%) Controls: 4 (13%) <u>Patients with falls in the preceding year, n</u> Cases: 21 (70%) Controls: 9 (30%)				
Ibitoye (2022)	People with idiopathic dizziness and controls <u>N at baseline</u>	Cases: patients with idiopathic dizziness Controls; recruited from a general-practice based	Minimum 6 months	Brain MRI findings; White matter hyperintensity	

	Cases: 38 Controls: 36 <u>Age median - % female</u> Cases: 77 - 37% Controls: 76 - 39%	community (all had no dizziness or imbalance)			
Sharma (2024)	Participants from the ARIC cohort and the UK biobank (UKB) cohort. *ARIC* <u>N at baseline,</u> Cases: 381 Controls: 1245 <u>Age mean (SD) - % female,</u> Cases: 78.9 (5.3) – 63.8% Controls: 75.4 (5.0) – 56.1%	*ARIC* Cases: patients with impaired balance Controls: patients with normal balance	n.a.	*ARIC* Brain MRI findings; Ventricular volume, White matter hyperintensity volume, Presence of prior infarct, Prior lacunar infarct, Microhemorrhage.	Multivariate analyses were performed, that were adjusted for the following factors that may confound associations between MRI biomarkers and mobility impairment: age, sex, race, hypertension, use of anticholesterol medication, diabetes body mass index (BMI) and current smoking. Analyses of the *UKB* cohort were not included as the mean age of the cases and controls was respectively 56 and 54 years old.
Whitman 2001	People with normal and impaired gait and balance <u>N at baseline</u>	Cases: 1) patients with a drop in Tinetti score >4	At a minimum of 1 year; and after mean interval of 4 years	Brain MRI findings; White matter hyperintensity volume	

	n total = n = 70 Cases: 1) 6 // 2) 13 Controls: 1) 64 // 2) 57 <u>Age, mean (SD) group 1-group 2</u> Cases: 84 (3) – 82 (4) Controls: 79 (3) – 79 (3)	2) patients with Tinetti score at final follow-up <24 Controls: 1) people with a drop in Tinetti score < 4 2) people with Tinetti score a final follow-up > 24			

For further details, see risk of bias table in the appendix