Baseline characteristics of a two-year prospective study aiming to link clinical components, cognitive and gait performances in healthy old people

The GABI Study

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Objectives: Introduce *The GABI Study* developed to highlight, the links between gait performances and brain changes in healthy old people and cognitive decline and falls occurring two years later.

Method: 131 community-dwelling older without cognitive disorders were recruited. All volunteers were assessed for neuropsychological performances, body compositions and muscle strength and for gait performances at usual (simple and dual task) and fast walking speeds. Brain MRIs were realized including T1-weighted and T2-weighted data using respectively multi-parametric, FLAIR and diffusion sequences. After a two-years follow up, a similar assessment will be plan to detect cognitive or falls. Comparison and correlations analysis will help the clinician to better discern components linked to cognitive decline and falls in healthy old people.

In fact: 131 healthy old people were assessed at baseline. Main characteristics of the population are presented enclosed.

To summarize: Authors introduce the original protocol of this first two-year prospective study including robust old people with a comprehensive assessment including gait tests and brain MRI to promote successful aging.
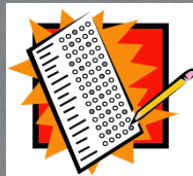
Study granted by the Belgian fund for scientific research (FNRS).
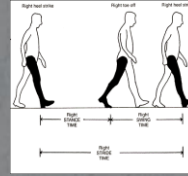
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Aim of the study

To show if gait performances and structural brain changes are associated with future cognitive decline and falls in healthy older.
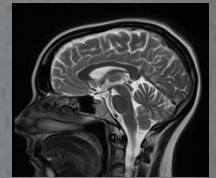
Method

| Comprehensive Geriatric Assessment | Gait tests using dual task | Structural Brain MRI |

Caracteristics of the population (n= 131)

Mean age	71,3 years old
Sex	56 % of women
Independence	1,5 % helped for IADL, higher score ADL 7/24
Cognitive performances	Mean MOCA > 26 (/30)
Nutritional status (mean)	BMI (25,86), MNA-4 (12,8/14)
Frail Status (Edmonton)	112 robusts / 19 mild frails
Functional status	Mean walking speed 1,25 m/sec
	SPPB ≥ 10 in 66%,

Strengths of the study

Prospective study including 131 healthy old people during 2 years

Including Gait Analysis and Brain MRI

Negative Outcomes followed: Cognitive decline and Falls