Supplementary Data

A Rating Scale for Gait Evaluation in Cognitive Deterioration (RSGE-CD): Validation Study

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RATING SCALE FOR GAIT EVALUATION IN COGNITIVE DETERIORATION (RSGE-CD)

I. Functional ability

1. Getting out of chair/bed

0- Normal
1- Somewhat slow and/or with mild difficulty, but completely independent
2- Marked slowness and/or difficulty. Can need leaning on any support or partial help to complete the action

3- Completely dependent. Disabled for carrying out these actions.

2. Going stairs up and down (do not consider such aspects as fatigue due to lung or heart disease, pain caused by osteoarthritis, etc.).

0- Normal
1- Somewhat slow and clumsy; could be normal for an older person. Help not needed
2- Moderate difficulty, slowness and/or clumsiness. Can need help
3- Much help needed and great difficulty or unable to use stairs.

3. Walking

0- Normal
1- Mild difficulty and/or slowness
2- Moderate difficulty and slowness. Help needed in some circumstances
3- Great difficulty and slowness. Much help needed for walking some steps or completely disabled for walking.

4. Falling (Consider what would happen if the subject was walking with his/her resources, including aids [walking stick, supports] but no help by other person/s).

0- Never or only accidentally
1- Rare falling (less than once per month)
2- Occasionally falls (more than once per month, but less than once per week)
3- Frequently falls (more than once per week), or cannot walk.

SCORE = /12

II. Examination

5. Rigidity in lower limbs (The subject remains sit down, calm, in a normal posture, with hips and knees flexed 90° and feet together. The examiner, placed laterally, puts the hands on subject's knees, asking the subject to relax as much as possible to allow passive abduction-adduction legs movements, 25–30 cm. of amplitude. Passive flexion-extension of the knees may also be explored).

0- Normal
1- Mild or hardly detectable rigidity
2- Moderate rigidity, but full range of motion is easily achieved
3- Severe rigidity. The range of motion is achieved with difficulty or is not achieved at all.

6. Arising from chair (The subject attempts to arise from a straight-back armchair with the seat around 45 cm. high. The hands rest on the proximal thighs, in a natural posture).

0- Normal
1- Slow, but needs only one attempt for getting up
2- Needs several attempts, swinging and/or pushing self up from arms of seat. Does not need help
3- Unable to arise without help.

7. Initiation (The subject stands on foot. He/she has been instructed to start walking immediately after the order to "go").

0- Normal
1- Slow initiation; takes some more time than normal, but with mild or null difficulty
2- Very slow initiation. Start-hesitation. Moderate difficulty.
3- Cannot start walking or hardly can initiate walking. Great difficulty.

8. Freezing when walking

0- None
1- Rare or occasional episodes, very short in duration (<2 s or <5 "short steps"). No falls from freezing
2- Frequently present and more lasting episodes (>2 s or >5 "short steps"). Occasionally falls from freezing
3- Continuously present; freezing blocks the gait in a very evident way. Frequent falls from freezing or cannot walk.

9. Step length

0- Normal
1- Shortened steps, although the swing foot passes completely the stance foot
2- Moderate/great steps shortening. The swing foot does not pass completely the stance foot
3- Short-stepped gait (*marche à petit pas*), each foot being displaced only few centimeters or unable to walk.

10. Arm swinging

0- Normal
1- Uni- or bilateral decreased arm swing
2- Uni- or bilateral absence of arm swing. Arms remain in normal posture
3- Absence of arm swing, with arms in flexion-adduction.

11. Turns

0- 0- Normal
1- 1- Somewhat slow and cautious. In 2 phases maximum
2- Moderately slow and difficult. Three or more phases are needed
3- Great slowness and difficulty, requiring help or supports, or cannot turn at all.

12. Dynamic balance while walking

0- Normal
1- Occasionally or mildly abnormal. Corrected easily or with minimal support
2- Moderately abnormal. Requires support (walking stick or help of a person for walking). Occasionally falls because of this disorder
3- Severely abnormal. Hardly can walk or cannot walk at all because of this disorder.

13. *Posture*

0- Normal
1- Not quite erect; slightly stooped posture, but could be normal for an older person
2- Moderately stooped posture, definitely abnormal. Can be mildly leaning to one side and/or initiate limb flexion
3- Severely stooped posture; can be moderately leaning to one side. Posture in marked flexion.

14. *Postural stability* (The examiner is behind the subject, who stands with eyes open and feet slightly apart [around 30 cm.]. The subject is instructed to take a step backwards to avoid falling as response to a sudden body displacement produced by a quick, forceful pull [around 7-8 cm.] on the shoulders).

0- Normal; recovers with 1 or 2 steps
1- Recovers with additional steps, but unaided
2- Does not recover. Falls if not caught by the examiner
3- Very unstable, tends to fall spontaneously or unable to stand without help.

SCORE = /30