Subjective Cognitive Impairment – Clinical Relevance?

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Overview

Epidemiology and characteristics

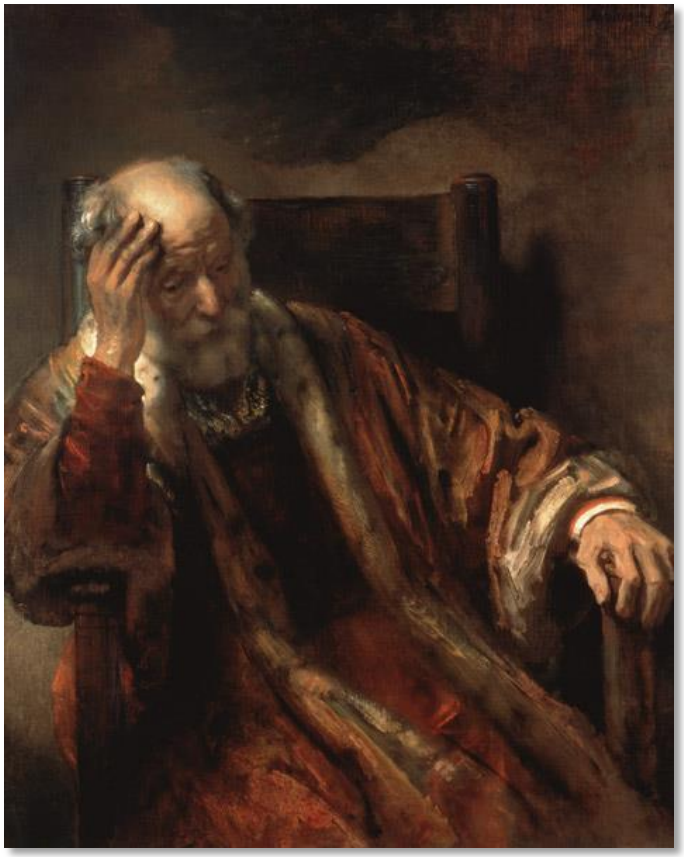
Subjective cognitive decline (SCD) as a diagnosis

SCD as a pre-clinical stage of dementia diseases

Diagnostic evaluation

Treatment

Perspectives



Rembrandt van Rijn: Homme âgé sur une chaise - 1652

Factors associated with cognitive complaints

- Cohort of dementia-free community-dwellers older people (N=1567; mean age 70.9)
- Cognitive complaints assessed using a validated 10-item questionnaire
- Personality traits, quality of life, perceived social support; depression, anxiety, cardiovascular risk factors and socioeconomic characteristics.
- Cognitive functioning was assessed through a comprehensive neuropsychological test battery.

Results:

- "Subjective cognitive impairment" in 18.5%
- Factors associated with cognitive complaints:
  - Poorer performance in memory and verbal fluency tasks
  - professional activity, neuroticism, and current depression were associated with SCD.
  - Exploratory analysis: associations with quality of life, neuroticism, and their interaction.

→ → **multiple factors involved**

→ → **association with lower quality of life**

Zullo L et al . Factors associated with subjective cognitive decline in dementia-free older adults – a population-based study. Int J Geriatr Psychiatry 2020,

Subjective cognitive decline – Definition(s)

In the literature :

subjective cognitive decline (SCD), subjective cognitive impairment (SCI), subjective memory impairment (SMI), subjective cognitive concern, subjective memory loss, cognitive/ memory complaint …

SCD is not a diagnostic category of the ICD-10, ICD-11 and DSM-5

Self-experienced persistent impairment AND normal cognitive performance[1]

1) Jessen et al. The characterisation of subjective cognitive decline. Lancet Neurology 2020

Characteristics of SCD

- Prevalence in older people : up to 80%
- Depends on definition and assessment methods (single question – questionnaire)
- Setting (Memory clinic > GP > general population), age, social and cultural background, ...
- Very heterogenous regarding aetiology and prognosis

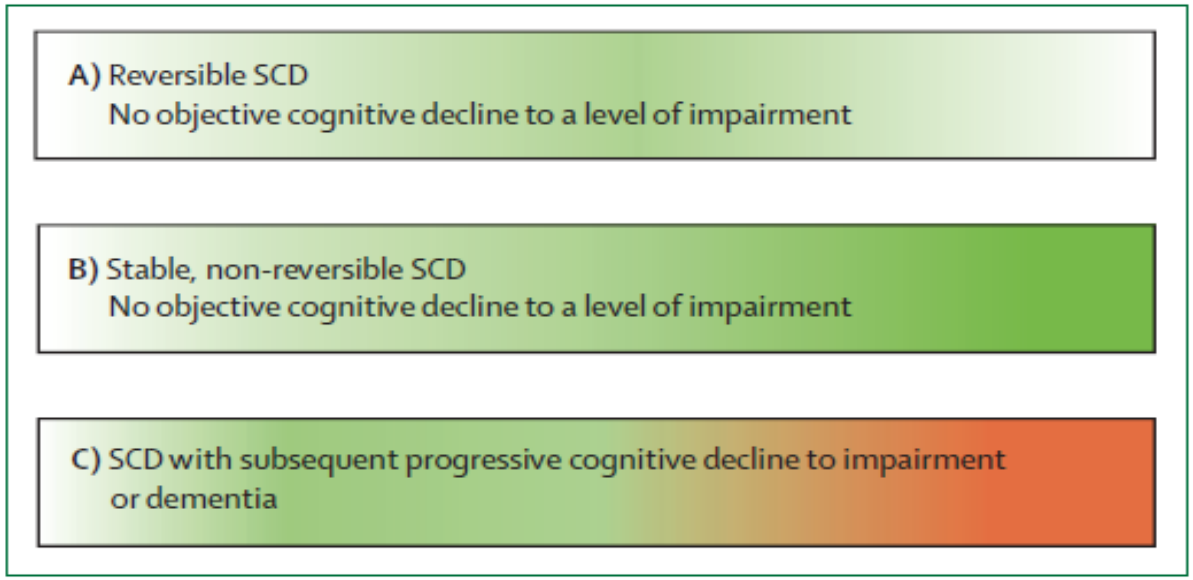


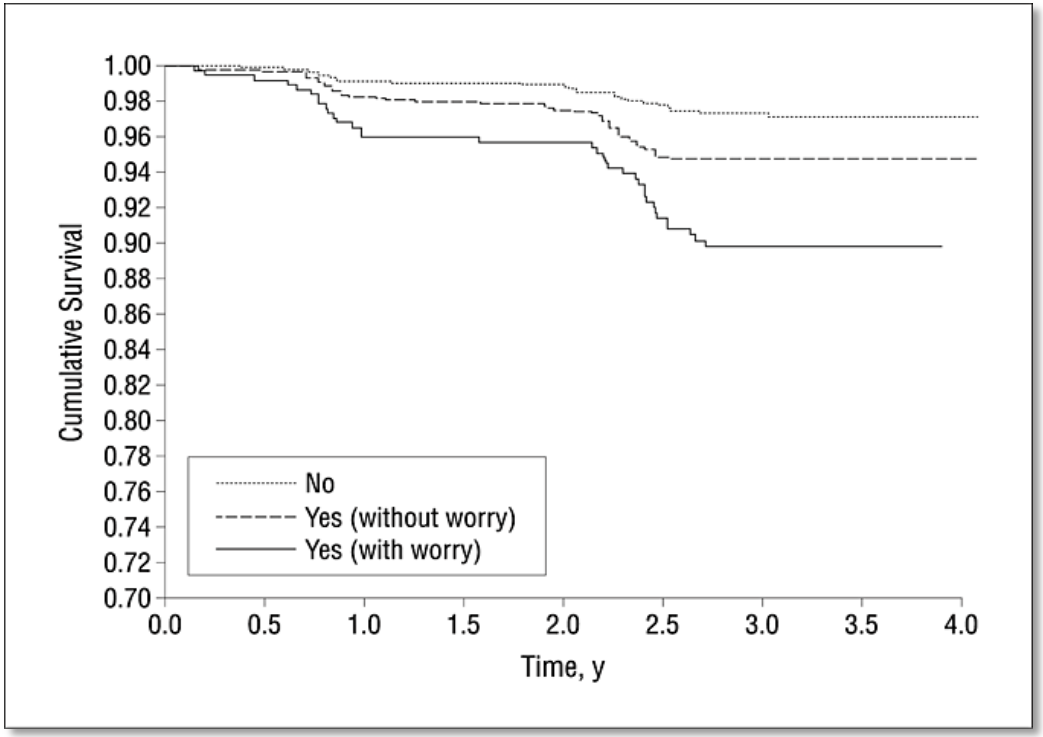
Figure 1: Schematic representation of trajectories of SCD and objective cognitive function over time

Jessen et al. The characterisation of subjective cognitive decline. Lancet Neurology 2020

SCD, MCI and Dementia

Prediction of dementia by subjective memory impairment –
Effects of severity and temporal association with cognitive impairment

"Do you feel like your memory is
- "no"
- "yes, but this does not worry me"
- "yes, this worries me."



Kaplan-Meier survival curves showing the conversion to dementia in Alzheimer disease relative to the presence of subjective memory decline with or without worry at baseline.

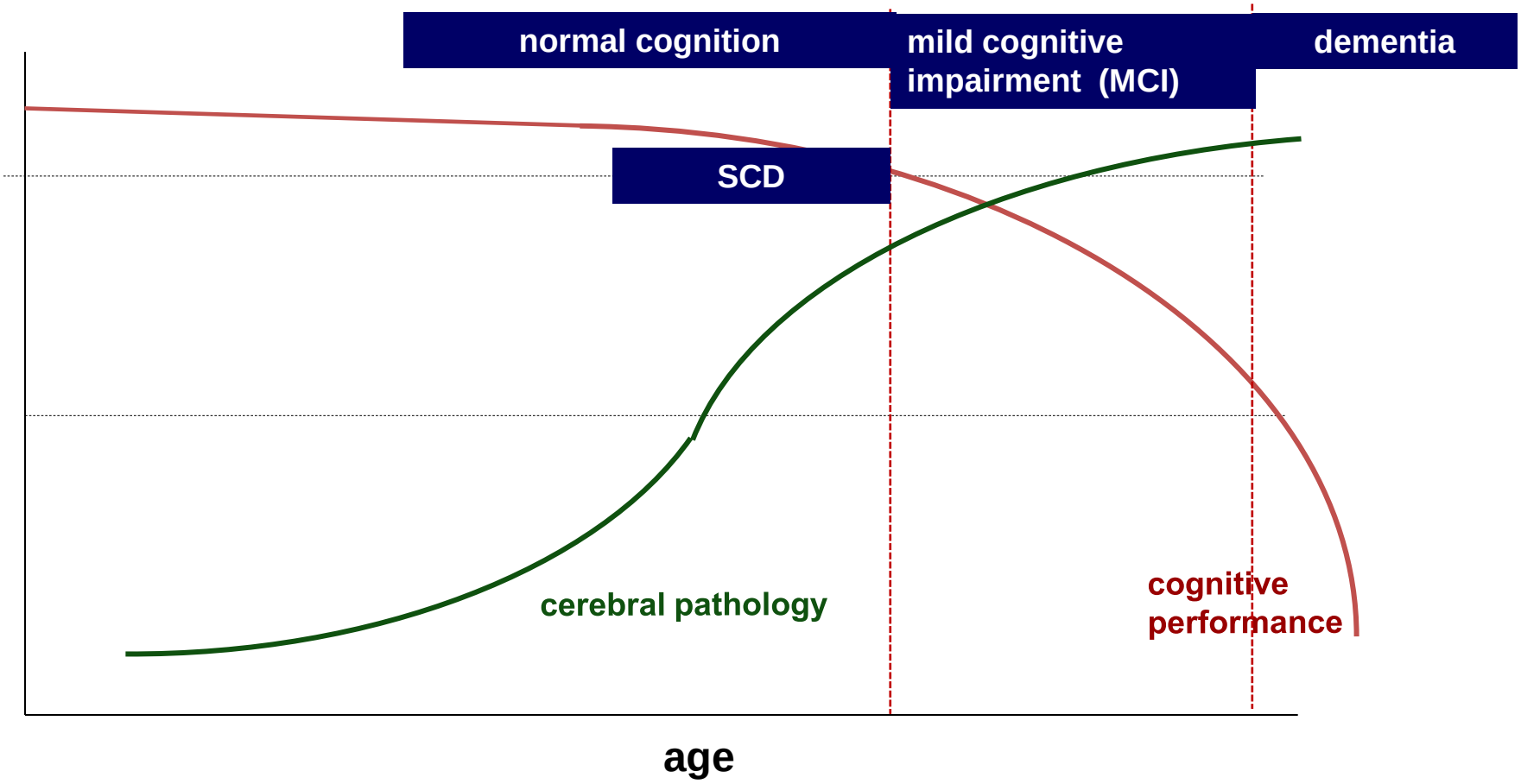
Jessen et al. Arch Gen Psychiatry. 2010

Increased risk of cognitive decline - SCD plus

- Subjective decline in memory
- Onset of SCD within the past 5 years
- Onset of SCD at 60 years and older
- Concern (worry) associated with SCD
- Persistence of SCD over time
- Seeking of medical help
- Confirmation of cognitive decline by an observer

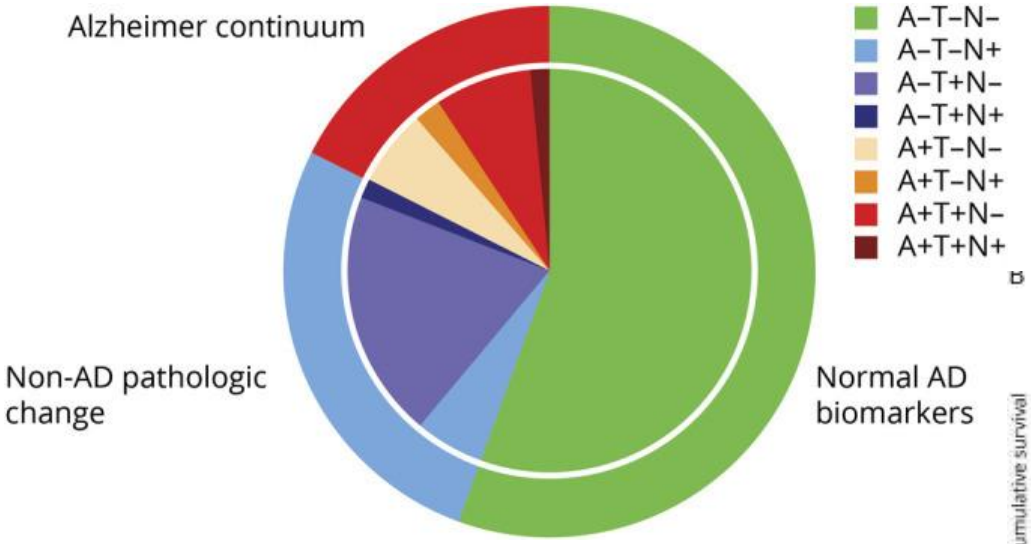
Jessen F et al. The characterisation of subjective cognitive decline. Lancet Neurology 2020

Cerebral pathology und cognitive decline

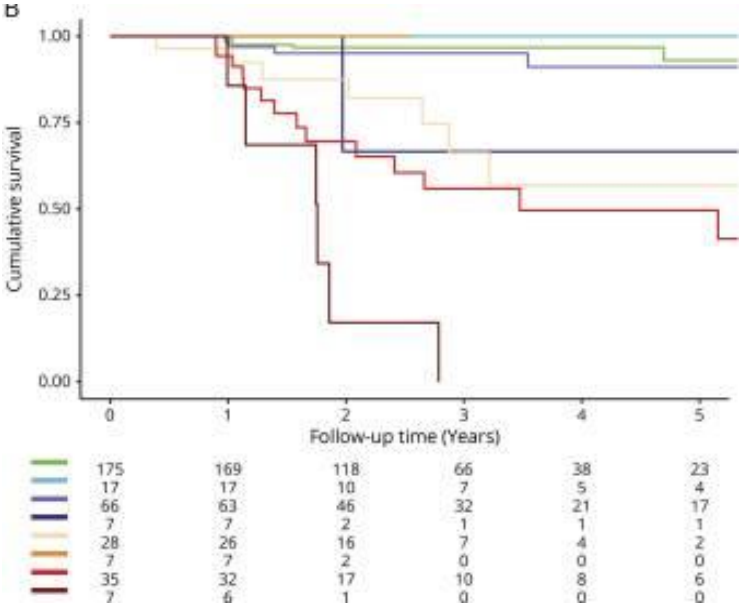


SCD and preclinical Alzheimer's disease

MEMORY CLINIC: SCD: N=693; of which N=342 with follow-up evaluation



A: amlyoid
T: tau
N: neuronal injury



Only a small proportion of the patients with SCD has preclinical Alzheimer's disease

A large part of the patients with SCD and pathological biomarkers will develop cognitive impairment

Ebenau JL et al. ATN classification and clinical progression in subjective cognitive decline: The SCIENCe project. Neurology 2020

In clinical practice

- In case of cog. complaints: propose screening test; if normal, consider comprehensive tests, in particular if features of increased risk
- Search for possible causes: medical conditions; (subclinical) psychiatric disorders: affective, anxiety, sleep disorders, etc.; revise medication
- SCD plus and possible subtle cognitive decline: consider further evaluation in specialised centre or memory clinic

Diagnostic evaluation

Memory clinic:

- Comprehensive clinical and neuropsychological evaluation: impaired cognitive performance?

Yes→→ « MCI » or « dementia » (« minor » or « major neurocognitive disorder ») → differential diagnosis; consider MRI, CSF biomarkers

No→→ « SCD »:

- MRI, fluid biomarker or PET diagnosis currently not recommended
- Further search for possible causes or contributing factors

Treatment

- Consider individual's characteristics, needs, and preferences
- Treat causes and contributing factors
- Lifestyle-changes: physical activity, cognitive and social engagement activities, control of cardivascular risk factors, treatment of mood disorders, Mediterranean-style diet, smoking cessation, high-quality sleep, hearing aids…
- Propose clinical and neuropsychological follow-up, in particular in cases of SCD plus if subjectively and/or objectively cognitive worsening;
- Informing about absence of objective impairment may reduce worries and anxiety

Perspectives

Improved risk scores including SCD may help to define the individual risk of future cognitive decline

→ Individually tailored prevention and life style recommendations
→ Clinical and neuropsychological follow up, early diagnosis and treatment in people at high risk

Improved non-invasive biomarkers will help to identify specific cerebral pathology

→ Early, preclinical disease modifying interventions

The implications of preclinical diagnosis and therapy at different levels - individual, social, ethical, health system - will need to be further addressed.

Conclusions

- SCD is common in older people; it is very heterogenous regarding etiology and prognosis.
- “Subjective Cognitive Decline” may be used for patients with self-experienced persistent impairment AND normal cognitive performance on standardized cognitive tests
- “SCD plus” is associated with mildly increased risk of cognitive decline
- Identify and treat causes and contributing factors; consider clinical follow-up
- Counseling should be individually adapted; it may include recommendations on lifestyle changes and further investigation of medical conditions, substance misuse, and mood, anxiety, and sleep disorders
- Currently not generally recommended: Use of biomarkers of neurodegenerative pathologies; cognition enhancing medication

Thank you!