Pre-stroke mobility associated with worse outcomes in dementia patients with stroke – data from the Swedish Dementia (SveDem) and Stroke registries

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CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report

Background

- Stroke is a common cause of morbidity and mortality in dementia
- Pre-stroke dementia is associated with worse outcomes
  - Higher rate of disability and mortality
- Baseline mobility is an important predictor of functioning and mortality after stroke
- Investigate the relationship between mobility and dementia

Methods

- Longitudinal cohort study based on SveDem, the Swedish Dementia Registry and Riksstroke, the Swedish Stroke Registry.

- Riksstroke- a Swedish national quality register for stroke care primarily aimed at health professionals and decision makers in health care.

SveDem- Swedish Dementia Registry

- National quality registry to improve diagnostics, treatment and care in dementia
- **Aim:** to follow the patient through the chain of care with yearly follow-ups starting at the time of diagnosis

SveDem patients are therefore

- ✓ at specialist units (100%)
- ✓ in primary care or (75%)
- ✓ in nursing homes

At present 71 000 individuals with a recent dementia diagnosis

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RESEARCH ARTICLE

SveDem, the Swedish Dementia Registry – A Tool for Improving the Quality of Diagnostics, Treatment and Care of Dementia Patients in Clinical Practice

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Inclusion

- 58154 patients with dementia in SveDem 2007-2014
- Of these 2233 patients had also suffered a stroke and were registered in Riksstroke
- Patients ≤ 65 years old excluded
- Patients with dementia who had a stroke up to 7 years before the dementia diagnosis were excluded

- **Resulted in 1689 patients**

Methods

- 1689 patients > 65 years old with dementia registered in SveDem and suffering a first stroke between 2007 and 2014 registered in Riks-stroke
- 7973 non-dementia age and sex-matched controls with stroke (from Riks-stroke) but without dementia
- Data on accommodation, stroke severity, mobility, care, death
- Outcomes presented here:
  - accommodation at discharge
  - accommodation, mobility and death at 3 months
- Logistic regressions were performed for 3 months follow up, and for accommodation and mobility at 3 months

Pre-stroke dementia and non-dementia groups

	Dementia N=1689	Non-dementia N=7973
Age (median) years	83	83
Nursing home	32%	8%
Pre-stroke independent mobility	61%	89%
Pre-stroke outdoor dependent mobility	25%	7%
Pre-stroke dependent mobility	14%	5%

The median time between dementia and stroke diagnosis was 512 days

Results

- Patients with dementia and stroke were more likely to be discharged to nursing home after a stroke than non-dementia stroke controls (51 vs 20% p<0.001).

Place of discharge	Dementia N=1689	Non-dementia N=7973	p-value
Home	457 (33%)	4008 (60%)	< 0.001
Nursing home	712 (51%)	1335 (20%)	< 0.001

Results: discharge

- Dementia and non-dementia patients who moved independently before the stroke were after the stroke more often discharged home (60% vs 28%).

Discharge place	Mobility Independent at baseline	p-value	Mobility dependent outdoors at baseline	p-value	Mobility dependent at baseline
Home	60%	< 0.001	28%	< 0.001	17%
Nursing home	19%	< 0.001	56%	< 0.001	75%

Results: discharge after stroke

- Among those who had independent mobility pre-stroke:
  - 43% dementia patients were discharged home compared to non-dementia controls (62%)
  - 37% dementia patients were discharged to nursing home compared to non-dementia controls (16%)
  - 19% dementia patients and 19% non-dementia controls were discharged to geriatric rehabilitation

Results at 3 months

- Dementia patients who had independent mobility pre-stroke were less likely to be mobility independent at 3 months post-stroke (48%) compared to non-dementia stroke patients (70%).

- Pre-stroke independent dementia patients had OR 2.56 (CI 2.05-3.20) of being completely dependent at 3 months compared to pre-stroke mobility independent non-dementia stroke patients

Mortality at 3 months

- After the stroke, mortality at three months was higher in dementia patients (31 vs 23% p<0.001) non-adjusted.
- Dementia and non-dementia patients with independent mobility pre-stroke had the lowest mortality 19% compared to 52% in the dependent mobility group
- Mortality at 3 months did not differ between stroke patients with or without dementia within each mobility group

Conclusions

- Patients with dementia who suffer a stroke did not present higher 3 months mortality than stroke-patients without dementia, once previous mobility was accounted for.
- However, mobility and disability after stroke were worse in patients with dementia and present a high burden of disability after a stroke.
- Studies on how to best strengthen independent mobility in dementia patients are needed

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