

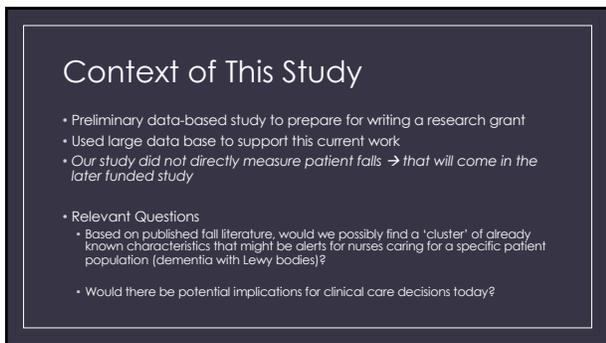
CHARACTERISTICS OF PATIENTS WITH
DEMENTIA WITH LEWY BODY DEMENTIA
DEMONSTRATE RISKS FOR FALLS

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Topics

- Context of Study
- Background & Significance
- Research Method
- Results
- Implications of Findings

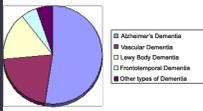


Context of This Study

- Preliminary data-based study to prepare for writing a research grant
- Used large data base to support this current work
- *Our study did not directly measure patient falls → that will come in the later funded study*
- Relevant Questions
 - Based on published fall literature, would we possibly find a 'cluster' of already known characteristics that might be alerts for nurses caring for a specific patient population (dementia with Lewy bodies)?
 - Would there be potential implications for clinical care decisions today?

Background

- Dementia &
 - specifically dementia with Lewy Bodies (DLB)
- Symptoms differ by dementia subtype, including mixed subtypes (Peavy, et al. 2016)
- Cognition and function differ by dementia subtype (Mayo, et al. 2013)




Dementias Related to Parkinson's Disease

More common DLB Symptoms

- Hallucinations
- REM sleep disorder symptoms
- over time, motor symptoms

*Parkinson's dementia

Who's falling today?



Who's falling today?

- And, can we possibly predict who it will be?



Background

- Every year hundreds of thousands of hospitalized patients fall and are injured
- Cost of non-fatal falls = \$31.3 billion in 2015 (Burns, et al. 2016)
- Repeated falls among patients with dementia with Lewy bodies (DLB) are 10% higher compared to persons with Alzheimer's disease (AD) (P < 0.001) (Imamura, et al. 2000)
 - These patients with DLB (in the Imamura study) did not yet have Parkinson's motor symptoms
- Multifactorial assessments combined with fall prevention strategies have demonstrated reduced falls with injuries (Tricco, et al. 2017)
- Meta-analysis: 54 RCTs with 41, 596 combined participants

Fall Risk Profiles

- high burden physical impairment - #1
- high burden cognitive impairment -#2
- older age
- females
- hallucinations
- delusions
- REM sleep disorder symptoms

Burns, 2016; Ek, et al. 2017

So,

- up-to-date evidence is needed by CNSs in order to design the most appropriate assessment protocols as the first step to prevent falls
- Gap = patients with DLB

- Knowing what we know about risks, can we identify a cluster of potential symptoms in patients with DLB?

Research Method

- Purpose
 - identify potential factors associated with known fall risks from the literature that might now be present in the specific patient population of DLB
- Quantitative, retrospective, data-based, descriptive study
- Utilized data (demographics, physical and sleep behavior, and cognitive) from an NIH funded Alzheimer's Disease Research Center
 - First study visit
 - Includes clinical data collected by clinicians for research purposes
- Diagnosis of DLB was autopsy confirmed
- Descriptive & inferential statistics

Results

- Sample size: 104 cases
- History of falling (clinician): 18.3%
- Age (when cognitive decline began): mean 71.0 years (SD 7.2)
- Functional status (PODS/FAQ, 10 total items): mean 62.3% items impaired (SD 29)
- Cognitive status screen (Mini-Mental State Exam - MMSE): mean 20.7 (out of 30) (SD 6.4)
- Hallucinations (NPI): 20%*
- Delusions (clinician): 40%*
- REM sleep disorder symptoms (NPI): 36%
- Parkinson gait (clinician): 29%

* n = 25

More Results

- Significant associations (p<0.05)

	Age	Cognitive Screen (MMSE)
Hallucinations	.402	ns
Delusions	.244	.407
REM sleep disorder symptoms	.144	ns
Parkinson gait	.228	.123
Motor symptoms (ie, resting tremor)	ns	.045

Eta was used as test for associations

Results

- What do they mean?
- We already knew from the literature that, among other things, physical & cognitive symptoms, hallucinations, delusions, and REM sleep disorder put people at high risk for falls
- From this study, we know that patients with DLB have these symptoms
- Therefore, patients with DLB are at high risk for falls, especially the older and more cognitively impaired they are (as the association results demonstrated)

Implications of Findings

- An appropriate clinical discrimination of DLB is recommended to target fall assessments
 - Repeated falls among patients with DLB are 10% higher compared to persons with Alzheimer's disease (AD) (P < 0.001) (Imamura, et al, 2000)
- Fall assessment protocols should include
 - Dementia: yes/no
 - Dementia with Lewy bodies: Yes/no/unknown
 - If yes, DLB:
 - Older age: yes/no (preliminary work: over 71.5; ROC = 50%)
 - Cognition impaired: yes/no (preliminary work: MMSE 12.5; ROC = 56%)
 - History of
 - Hallucinations: yes/no
 - Delusions: yes/no
 - REM sleep disorder: yes/no
- More research is needed
 - For larger samples of patients actually in hospitals & directly measuring falls
 - Accurate diagnoses of dementia subtypes are critical for research & appropriate patient care

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