Eating & Swallowing Deficits in Individuals with Dementia
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Today’s Agenda
Systematic Review

What is Dementia?

Eating & Swallowing Deficits in Individuals with Dementia
Today’s Agenda

What is the prevalence of dementia in Canada?

Today’s Agenda

What do we know about eating and swallowing deficits in individuals with dementia?

Today’s Agenda

What do we know about eating and swallowing assessment, management, and treatment in this population?

Today’s Agenda

Conclusions

Systematic Review

Purpose:

- Describe, synthesize, and interpret literature on dysphagia and/or autonomic nervous system dysfunction in dementia
- Identify gaps in the existing literature

Questions
Systematic Review

Methodology:
- Systematic searches of the PubMed, EBSCOhost, PsychINFO, Cochrane, EMBASE, and Scopus databases were conducted

What is Dementia?
- A syndrome caused by progressive disorders that affect:
  - Memory
  - Thinking
  - Behaviour
  - Ability to perform activities of daily living (ADL)

What is Dementia?
- Alzheimer's disease
- Vascular dementia
- Lewy body dementia
- Frontotemporal lobe dementia
- Parkinson's disease dementia

What is the Prevalence of Dementia in Canada?

Dysphagia in Alzheimer’s Disease (AD)
- Prevalence of dysphagia in moderate and severe AD ~ 32% to 93%
  - Chouinard et al., 1998
  - Volier et al., 1989
  - Horner et al., 1994
  - Feinberg et al., 1992
Dysphagia in AD

• Dysphagia may occur early in AD

Humbert et al., 2010
Priefer and Robbins, 1997

• Functional changes to the swallow may be associated with functional changes in the cortical swallowing network

Humbert et al., 2010
Humbert et al., 2011

• The oral and pharyngeal stages may be affected

Humbert et al., 2010
Garon et al., 2009
Suh et al., 2009
Wada et al., 2001
Priefer and Robbins, 1997
Horner et al., 1994

• Dysphagia may occur in all stages of AD and may be a marker of disease severity

Wada et al., 2001
Horner et al., 1994

• Eating and swallowing deficits in AD appear to be less severe compared with other types of dementia

Shinagawa et al., 2009
Ikeda et al., 2002

• Behavioural eating difficulties may occur in all stages of AD

Edahiro et al., 2012
Priefer and Robbins, 1997
Durnbaugh et al., 1996
Burge, 1994
Morris et al., 1989
Suski and Nelsen, 1989
Dysphagia in Vascular Dementia (VaD)

- The oral and pharyngeal stages may be affected

Suh et al., 2009
Logemann, 1998

Dysphagia in VaD

- Aspiration rates and silent aspiration rates appear to be higher than those of AD patients

Suh et al., 2009

Dysphagia in Lewy Body Dementia (LBD)

- Aspiration rates in individuals with LBD have been found to be 35.6%

Yamamoto et al., 2010

Dysphagia in LBD

- Caregivers report:
  - Significantly greater swallowing deficits with solids and liquids
  - Increased difficulty with sputum, loss of appetite, and constipation

Shinagawa et al., 2009

Dysphagia in Parkinson’s Disease Dementia (PDD)

- Prevalence of dysphagia in PDD ~ 25%

Bine et al., 1995
Dysphagia in PDD
• Individuals may demonstrate an impaired ability to manipulate food in the oral cavity
  Athlin et al., 1989

Behavioural Eating Deficits in PDD
• Disabilities may occur in the areas of concentration, communication, manipulation of food on the plate, and transporting food to the mouth
  Athlin et al., 1989

Dysphagia in Frontotemporal Lobe Dementia (FTD)
• Pharyngeal stages may be primarily affected
  Langmore et al., 2007

Behavioural Eating Deficits in FTD
• Caregivers have reported swallowing problems, appetite changes, food preference changes, and abnormal eating behaviours
  Ikeda et al., 2002

What do we know about eating and swallowing assessment, management, and treatment in this population?

Assessment
• Best assessment practices are currently unknown
  Feinberg et al. 1992
  Leder et al., 2009
  Hansen et al., 2011
Treatment/Management
• A physiotherapist administered cervical spine mobilization protocol may improve “dysphagia limit” in individuals with severe AD and altered neck posture
Bautmans et al., 2008

Treatment/Management
• Thickening liquids to a honey-thickened consistency may eliminate thin liquid aspiration in individuals with dementia
Logemann et al., 2008
Robbins et al., 2008
Hines et al., 2010

Treatment/Management
• High calorie supplements and other oral feeding options may help individuals with dementia gain weight
Asplund et al., 1991
Hanson et al., 2011

Treatment/Management
• Treatment with dopamine agonists and angiotensin-converting enzyme inhibitors (ACEIs) may result in positive outcomes in swallowing and feeding
Yamaguchi et al., 2010

Treatment/Management
• Tube feeding vs. hand feeding
VanOrt and Phillips, 1992
VanOrt and Phillips, 1995
Finucane et al., 1999
Garrow et al., 2007
Sampson et al., 2009

Conclusions
• Demographics
• Nature of Dysphagia
• Contribution to Eating Deficits
• Assessment
• Treatment
Conclusions

• Correlations
• Neural Mechanisms

References


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