Social Cognition in Dementia: Informing Diagnosis, Prognosis and Management

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CHANGES IN DEMENTIA

Memory

Language

Social cognition

Frontotemporal Dementia Research Group
ELEMENTS OF SOCIAL COGNITION

- Face processing
- Emotion perception
- Empathy
- Theory of Mind (Understanding others)
SOCIAL DYSFUNCTION

- Foster appropriate responses
- Establish relationships
- Recognise intentions of others
- Develop emotional reciprocity

Carer burden
DEMENTIA SYNDROMES

Behavioural-variant frontotemporal dementia (bvFTD)

- Executive dysfunction
- Change in personality and behaviour
- Marked frontal lobe atrophy

Alzheimer’s disease (AD)

- Memory disturbance
- Orientation, visuospatial
- Medial temporal lobe atrophy
SOCIAL/BEHAVIOURAL CHANGES

- In **frontotemporal dementia** changes in social cognition are profound
  - Apathy/ loss of motivation
  - Loss of empathy
  - Inappropriate behavior in social situations
  - Reduced engagement in social settings
  - Altered personality

- In **Alzheimer’s disease** changes in emotion and behaviour are mild
  - Difficulty recognising friends/family
  - Agitation
  - Apathy
SOCIAL COGNITION IN DEMENTIA

- Brain regions involved in social cognition affected to different degrees in bvFTD and AD
HOW DO WE ASSESS SOCIAL COGNITION

Ehninger, Matnyia & Silva (2005)
WHY IS SOCIAL COGNITION IMPORTANT?

Diagnosis

- Is this dementia?
- Differentiating between dementia types (frontotemporal dementia vs. Alzheimer’s)
• bvFTD impaired on sarcasm detection
• AD perform within normal limits

Kumfor et al, (under review) *Cortex*
WHY IS SOCIAL COGNITION IMPORTANT?

**Diagnosis**
- Is this dementia?
- Differentiating between dementia types (frontotemporal dementia vs. Alzheimer’s)

**Prognosis**
- Tracking how the disease progresses
- Understanding how and which symptoms change over time
UNDERSTANDING PROGNOSIS

General cognition ability is similar in bvFTD and AD

Sarcasm detection is affected early in bvFTD and continues to decline

Kumfor et al, (2014) JNNP
WHY IS SOCIAL COGNITION IMPORTANT?

**Diagnosis**
- Is this dementia?
- Differentiating between dementia types (frontotemporal dementia vs. Alzheimer’s)

**Prognosis**
- Tracking how the disease progresses
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**Management**
- How can we improve patient quality of life?
- How can we reduce carer burden?
IMPROVING EMOTION RECOGNITION

INCREASING SALIENCE
• Emotion recognition impaired in bvFTD and SD
• Increasing salience improves performance in bvFTD but not SD

SUMMARY OF FINDINGS

Frontotemporal dementia

• Aspects of social cognition are one of the primary and earliest symptoms
• With disease progression, these skills continue to decline
• Interventions need to target social cognition
• Carer burden is high

Alzheimer’s disease

• Typically, early symptoms are dominated by memory impairment
• Despite general cognitive decline, social skills can remain relatively intact
• May be able to harness these skills to improve quality of life
TAKE HOME MESSAGES

• Important to be aware of non-cognitive symptoms of dementia
• Helpful to assess social cognition in dementia
• These symptoms are due to brain changes
• Need to develop ways to improve social interactions
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