An approach to cognitive symptoms in 1° care

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GP referral

• “I would be grateful if you could see this 73 year old lady who is a Gujarati speaker and ... speaks very little English comfortably …

• She … recently scored 1/9 in her GPCOG assessment

• She appears to have a problem with short term memory and also some of her long term memory is impaired as well

• Her family also report that she has shown a decline in her cognitive function over the … last few years …”
In clinic

• Patient attends with daughter

• Can speak some English but daughter interprets

• Patient: Lifelong forgetfulness, esp. losing items around the house
Informant history from daughter

• Mother died 4 months ago, stressed as a result
• Also had several infections
• Seemed a bit forgetful and “disorientated”
• Now all resolved
• Has twice left front door open
• A bit slower cognitively
• No other current cognitive symptoms
• No decline in functional level
• Looks after granddaughter; no concerns
• Always been mildly forgetful
• Always been prone to losing things
• Always had difficulty understanding certain concepts
• Always had difficulty telling the time
• Wasn’t able to help daughters with their homework
Background

- Educated in Tanzania to secondary level
- Unclear how good academically
- Literate in Gujarati, semi-literate in English
- Worked in factory and shop
Assessment

• MMSE performed in English with daughter translating instructions
• Scored 23/30
• Lost
  – 1 point on orientation in place (unable to name the country, persistently referring to "London")
  – 1 point on registration
  – 2 on backward spelling
  – 1 on recall
  – 1 on repetition
  – 1 on copying
Formulation

• No new cognitive symptoms or decline in functional level
• Likely below average intellectual ability
• MMSE score is an underestimate of cognitive status due to cultural and linguistic factors
• Patient and family reassured that no dementia syndrome present currently
Learning points

• Beware use of cognitive tests where there is a language or significant cultural barrier

• A very low score is likely invalid if patient doesn’t have significant decline in ability to perform ADLs independently

• Always establish the patient’s baseline intellectual function
  – Educational and employment history

• The informant history is much the most important piece of information
“I’m worried about my memory”

• Awareness (and fear) of dementia in the population is increasing

• Public health campaigns have not distinguished between benign and non-benign patterns of memory loss

• This is generating a lot of worried well people

• Simple discriminating rule:
  • Self-reported memory symptoms are usually benign
  • Informant-reported memory difficulties are rarely benign
Risk of dementia is decreasing

Matthews et al, Lancet 2013
What do we mean by “Dementia”?

Causes of dementia <65

- Other dementias: 14%
- Huntington's disease: 5%
- Dementia with Lewy bodies: 7%
- Alcohol related dementia: 10%
- Frontotemporal dementia: 12%
- Vascular dementia: 18%

Causes of dementia > 65

- Other dementias: 30%
- Vascular dementia: 16%
- Alzheimer's disease: 54%

Kester M I, Scheltens P Pract Neurol 2009;9:241-251
Subjective memory symptoms

- Organic causes of isolated memory loss in young people are rare

- The assumption should be that anyone under 50 presenting alone with subjective memory symptoms does not have dementia

- But might have one of the following:
• Depression
• Anxiety
• Obstructive sleep apnoea
• Excess alcohol or cannabis intake
Types of memory complaint

• Worried well people report lapses of attention or concentration
  – “I go upstairs/into a room/open the fridge door and forgot why I did so”

• Or minor memory or word retrieval difficulties
  – “I can’t remember people’s names”
  – “I couldn’t think of the word for …”
Subjective memory symptoms

• These lapses occur in EVERYONE

• People with anxiety disorders tend to interpret them in a catastrophic way, leading to a fixed conclusion that “something must be wrong”

• People with depression, anxiety, alcohol or sleep disorders probably experience them more often
Important discriminating factors

• If patient is aged < 50
• If patient attends alone reporting attentional lapses, which have
  – not caused anyone else to become concerned
  – not caused any decline in functional level (e.g. work performance)
• Then dementia is highly unlikely and you should ask about mood/sleep/EtOH
Worried well

- Sometimes people are just worried because a family member had dementia
- Dementia in late life is extremely common
- Most families will have an older relative who got dementia
- The vast majority of dementia over the age of 55 is sporadic, not genetic
- You cannot reliably predict your risk based on your family history
• The commonest organic cause of memory loss in people aged > 50 is Alzheimer’s disease
• Initial symptoms are insidious and are rarely noticed first by the patient
• Typical examples are lapses in episodic and prospective memory
  – Forgetting a phone conversation
  – Asking the same question repeatedly
  – Forgetting a plan that was made a few days ago
• Mood symptoms often accompany initial cognitive decline in Alzheimer’s and other dementias

• A clue is that cognition does not improve once depression has resolved
When to be concerned

• Spouse/relative/friend brings patient in
• They do most of the talking
• Symptoms are of genuine amnestic type
• Patient less aware of problems than informant
• Especially, but not exclusively, if patient is > 65 (7% of >65s have dementia)
  – Degenerative dementias do affect <65s but virtually never <50 other than in genetic cases
• Objective decline in work performance is a HARD sign that something is amiss
• Alzheimer’s disease can also present with visuospatial difficulties
  – e.g. bumping car into other vehicles, not being able to find objects in clear field of vision

• Also breakdown in word fluency
Alzheimer’s Disease

- Cognitive symptoms may respond to Cholinesterase inhibitors

- NICE recommends that all patients with early or moderate AD should be considered for CEI

- Severe AD may benefit from Memantine but effects are modest
Vascular cognitive impairment

- More likely in people with known vascular disease or RFs
- May occur post-stroke
- Most common pattern is subcortical small vessel disease
- Causes cognitive slowing, apathy, gait apraxia
Dementia with Lewy Bodies

- Causes visual hallucinations
- Cognitive fluctuations
- Often significant anxiety component
- Insidious cognitive slowing, executive dysfunction, visuospatial dysfunction, amnesia
- Patients may or may not look Parkinsonian
Frontotemporal dementia

- Two major syndromes
- Behavioural variant
- Language variant

- 5% will get MND
Potentially modifiable causes that can be detected in 1° care

- Depression
- Alcohol
- Obstructive Sleep Apnoea
- Drugs e.g. anti-cholinergics, benzos
- Severe anaemia
- Hypothyroidism
- B12 deficiency
- Syphilis/HIV
Rarer organic causes

- Parkinson’s disease
- Multiple sclerosis
- Huntington’s disease
- Parkinson-plus disorders (PSP, CBD)
- CJD
- Obstructive or normal pressure hydrocephalus
- Auto-immune limbic encephalitis
- Cerebral vasculitis
- Space occupying lesions
Should I do a memory test?

• Taking the history from the patient and informant is much more helpful
  – IQ-CODE is an excellent structured informant hx

• If there is no decline in ADLs, especially at work, then it is very unlikely that a brief cognitive screening test will be sensitive enough to detect anything

• If there is decline in ADLs, the patient requires specialist assessment unless you can identify a treatable cause, whatever the brief memory test result
Brief cognitive tests

• There are several different causes of dementia
• They present with different patterns of cognitive deficit
• No quick screening test can pick them all up
• High functioning people will perform normally on brief tests such as MMSE (“ceiling effect”)
• Language, cultural and educational factors can cause false-positive abnormalities on brief tests
• So they’re not very reliable
But …

• The commonest cause of dementia in >50s is Alzheimer’s disease

• The commonest presentation of AD is with impaired episodic memory and disorientation in time and place

• AD also causes visuospatial and executive dysfunction

• Most other dementias also cause some executive dysfunction
So … select a battery that tests

- Episodic memory e.g. remembering an address or a list of words
- Orientation to time and place
- Visuospatial function e.g. copying a pentagon or a cube
- Executive function e.g. clock draw, Luria
Scoring a test

• Relying on a cut off is only useful if you know what that patient would have been expected to do at their best

• No cognitive test has normative data for all the populations in South London

• The score is not as helpful as your observations about how the patient does

• E.g. patient scores 100% but it all seems to take too long
How do we investigate cognitive symptoms in secondary care?

• Always
  – Patient and informant history
  – Neurological examination
  – Extended “bedside” cognitive testing
  – Brain imaging (CT or MRI) where indicated

• Often
  – Neuropsychological assessment

• Occasionally
  – CSF examination +/- biomarkers
  – Functional imaging (FDG-PET, DaT)
  – Genetic tests
  – EEG
Learning points

• Imaging is often misleading in dementia
  – Normal scan in someone with evolving dementia
  – Abnormal scan in cognitively normal patient
  – Vascular disease on brain scan leads to diagnosis of “vascular dementia” when clinical presentation is actually Alzheimer’s disease

• Do NOT make a diagnosis based on brain imaging
63 year old man with Down’s syndrome and LD
Recent onset of bowel/bladder emptying on bedroom floor at night
No other change in functional level
In summary

• Young people don’t get dementia
• But they do get (health) anxiety, depression, inadequate sleep and too much alcohol and drugs

• Older people do get dementia (as well as all of the above)
• Taking a collateral history and observing the patient are the most powerful interventions

• History taking and blood tests in 1° care will rule out dementia or a reversible cause of cognitive impairment in many cases
Cognitive neurology service

- Diagnosis of treatment of cognitive disorders including dementia

- Weekly consultant-led cognitive neurology clinic at SGH

- New patient slots one hour

- Post-diagnosis follow-up is nurse-led
  - Jen Tulloch, dementia clinical nurse specialist

- Dedicated neuropsychologist
  - Claire O’Neill, Senior Clinical Neuropsychologist
St George’s cognitive neurology

• We do not use strict referral criteria, but we tend to see:
  – Younger patients
  – Complex or atypical presentations

• We run a support group for people with early onset dementia

• We run clinical trials in Alzheimer’s disease
Questions?