Schizophrenia and Dementia
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This talk

- Why is this relevant for Memory Services?
- Two quick cases
- Cognitive impairment in schizophrenia
  - Frequency
  - Nature
  - Prognosis
- Dementia in schizophrenia
  - is there an increased risk?
  - causes
- Differentiating between AD and cognitive deficits in schizophrenia
- Assessment and treatment
Why is this relevant for Memory Services?

- People with schizophrenia increasingly referred for assessment
- Assessment and treatment of cognitive disorders in schizophrenia often falls between two services
- Memory Services need knowledge to triage effectively and to assess and advise with confidence
Case 1

- 75 year old man in care home
- Longstanding schizophrenia
- Asked to see as he had severe Parkinsonian symptoms
- Staff said he was orientated around the home
- At Interview
  - Alert, stiff, kyphotic, little eye contact, rarely answered a question directly, preoccupied, chuckling to himself, little social awareness
  - Speech incoherent-“seem to be strange, standing so low, pat him on the back....”
  - Cognitive assessment impossible to do due to poor concentration and preoccupation
Case 2

- 78 year old woman in care home re-referred for review of cognitive changes
- Longstanding schizophrenia with paranoid delusions
- When last seen was alert cheerful speech clear and coherent
- Good social function
- Had stroke last year
- Since then, increasing disorientation, new and severe recent memory deficits, repetitive speech, questioning
Two key points from the cases

• The two types of schizophrenia – (previously known as Type 1 and Type 2)
• Difference between the stable impairments of schizophrenia (Case 1) and the new and progressive changes of dementia (Case 2)
• But… it isn’t always that simple
Cognitive impairment in schizophrenia

• Emil Kraepelin (1893)
• Paraphrenia
  – Paranoia but no cognitive decline
• Dementia praecox
  – Onset of cognitive impairment early
  – Progressive decline
  – Sparing of memory
Cognitive impairment in schizophrenia

- Almost universal
- Detectable in childhood (age 6-8)
- Some schizophrenia is neurodevelopmental and so deficits may manifest and intensify during childhood and early adulthood
**Natural history** Tripathi et al 2018

- Late onset schizophrenia associated with higher rates cognitive impairment

- But duration of illness not correlated with cognitive impairments

- Deficits are stable over time in both severity and quality

- Cognitive deficits may worsen during psychotic relapses (remember Louis Wain’s cats)
The impairments

Bowie and Harvey 2006

- Global impairment – no “neuropsychological signature”
- Deficits found in multiple areas
  - Verbal
  - Visuospatial
  - Attention
  - Executive function
  - Processing speed
  - Social cognition
  - Working memory
  - Verbal fluency
  - Verbal memory
Thought disorder

Two men are controlling the brain through telethapy (sic) or by means of ways of the spirit who open and closes the back channels of my brain releasing words and holding back the truth, by no means will I speak but will answer only to written questions by means of writing, knowing full well the channels of my brain is filtering and only half of what is the truth, also I am knowing I am being read not only by a few but many very clever people

- Poverty of content
- Tangentiality
- Derailment
- Neologisms
- Echolalia
- Word approximations

From Sims, Symptoms in the Mind
Cognition as predictor of outcome

- Hegarty et al (1994) – functional outcomes have improved little over the last 100 years despite better treatments for positive symptoms and more humane care
- Some evidence that some specific deficits contribute to poorer functional outcomes
  - Executive function
  - Verbal memory
  - Attention/vigilance
Dementia and schizophrenia

- Laisheng and Huang (2018) meta-analysis
  - Schizophrenia associated with increased risk of dementia
  - Relative risk 2.3 but variation between studies

- Korner et al (2009) - Danish 3-4.6 year follow up People with late onset schizophrenia 2-3X higher risk dementia
  - Less likely to be diagnosed as AD
Brain changes in people with schizophrenia and dementia

- Less likely to have plaques and tangles compared with people without schizophrenia who have AD
- Some studies have shown increased no. plaques in cingulate and temporal cortex
- Neurochemistry- reduced cortical VIP and neuropeptide Y, reduced 5HT and NA
Brain imaging in schizophrenia

- Both AD and schizophrenia associated with similar brain changes
  - Ventricular enlargement
  - Medial temporal lobe atrophy
- Some evidence that people with schizophrenia have frontal and parietal atrophy
  - Shenton et al 2001
  - Haukvik et al 2013
**SCHIZOPHRENIA**

- Early onset
- Stable over time
- Global from the start
- Attentional and executive deficits common and severe
- Fluctuation with psychotic relapse

**DEMENTIA (AD)**

- Late onset
- Progressive
- Starts with memory deficits
So

— what to do in clinical practice

• Do cognitive and ADL assessment of people with schizophrenia when referred to service so you’ve got a baseline
  – ACE and BADLs fine

• When referred a person with schizophrenia and possible dementia
  – Get a history from an informant (use IQCODE if you like)
  – Get and look at old notes
  – Is the diagnosis of schizophrenia correct (it often isn’t)
Treatment of cognitive deficits in schizophrenia (Hurford et al. 2011)

- Optimise physical health
- Reduce anticholinergic burden (medichec.com)
- Review psychiatric meds - sedatives, mood stabilisers etc
- Treat depression
- Ensure psychosis treated optimally – do they need clozapine? Antipsychotics - atypicals may be better
- No evidence of efficacy for ACEIs (unless person has AD), SSRIs, glycine and stimulants
- Cognitive rehabilitation
  - Remediation
  - Compensatory – errorless learning, OT environmental adaptation
CONCLUSIONS

- All people with schizophrenia have cognitive deficits but they are at an increased risk of dementia too
- Take referrals seriously
- History (as always !) is the key
- Scans are not that helpful
- You can do something to help- medication review, OT, clarify diagnosis etc