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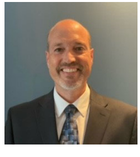
Your Speakers

MR WILLIAM ROBINSON, MSW



MR ROB LEFFLER, RPH

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Objectives

1) Review the types and stages of dementia
2) Review methods for identifying triggers for behaviors associated with dementia.
3) Discuss non-pharmacologic approaches to mitigating behaviors associated with dementia
4) Discuss pharmaceutical approaches to mitigating behaviors associated with dementia

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Types and Stages of Dementia

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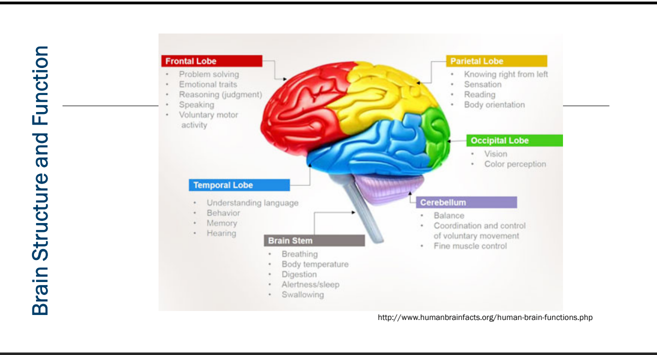

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Alzheimer's Dementia

Dr. Aloysius Alzheimer
1864-1915

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- 1906 – Dr. Alzheimer described the case of a 51 year-old female with cognitive loss
- The disease was considered rare and thought to be found only in people under 65
- Dr. Alzheimer examined this patient's brain and discovered amyloid plagues and other changes that now characterize this disease

- Depression
- Memory loss
- Cognitive loss
- Gait problems
- Incontinence
- Delirium
- Hallucinations

Auguste Deter
1850-1906

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Alzheimer's Dementia

- Major risk factor is age:
  - 60-65: 1 in 100
  - 70-75: 1 in 25
  - 80-85: 1 in 6
  - 90-95: 1 in 3
- Other risk factors:
  - Gender (women > men)
  - Family history of AD or other neurodegenerative diseases
  - Cardiovascular or Cerebrovascular risks
    - HTN
    - DM
  - Race (2-4x more common in AAs)
  - Head injury
  - Low education

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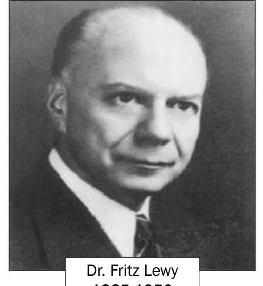
Lewy Body Disease


Dr. Fritz Lewy
1885-1950

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- 1912 – During the study of Parkinson's patients
  - Small "bodies" containing fibrils were noted as the pathological cause of Parkinson's
  - Dementia due to Lewy bodies was first described in 1962
  - The dementia was named after Dr. Lewy in 1962

Diagnosed with Lewy body dementia prior to his suicide.

Robin Williams
1951-2014

https://www.scientificamerican.com/article/how-lewy-body-dementia-gripped-robin-williams1/

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Lewy Body Disease

HOW IT STARTS

Appearance is a mixture of Parkinson's and Alzheimer's

Lewy Body Dementia patients are very sensitive to some medications

SIGNS

Early presence of visual hallucinations

Fluctuating confusion

Early incontinence

Moderate to no Parkinson's motor problems

Less memory issues than Alzheimer's patients

Sub-cortical dementia

Capgras Syndrome

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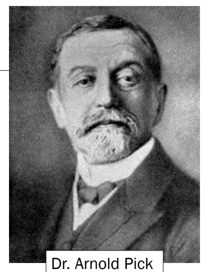
Frontotemporal Dementia or Pick's Disease



Dr. Arnold Pick
1851-1924

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- 1892 – Dr. Arnold Pick described a condition that consisted of alterations in judgement, abstract reasoning, and behavioral disinhibition
  - Tau tangles
  - 4th most common dementia
  - Often misdiagnosed as Alzheimer's

Dr. Allan Zarkin

Symptoms

Frontal and Temporal atrophy
Early Behavior, Language and Eating disorders
- Behavioral decline

Child-like behavior initially
- Apathy
- Irritability

May still score well on cognition tests

http://www.nytimes.com/2000/01/22/nyregion/doctor-carved-his-initials-into-patient-lawsuit-says.html

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Frontotemporal Dementia

DEMENTIA

- Was thought to be rare at one time
- Found in younger patients
- Scans show lobular atrophy
- Studies often don't include Pick's patients in their protocols

DAMAGE

- Emotional lability
- Pseudobulbar affect
- Changes in personality
- Inability to read emotions
- Disinhibition
- Agitation-apathy

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Review Methods to Evaluate Behaviors

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Evaluating Behaviors

- Evaluate reasons behaviors occur
- Gain attention and trust
- Make direct eye contact
- Address by name
- Eliminate distractions
- Be aware of body language, facial expression, and tone of voice
- Speak slowly
- Speak in short sentences
- Wait for a response
- Use closed-ended questions
- Help develop relationships with you and others
- Use visual demonstration and tactile cues
- Use nouns (shirt, toothbrush, chair) and avoid pronouns (he, she, they, it)
- Use consistent cues/instruction
- Use the visual field
- Anticipate needs

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Evaluating Behaviors

Behavior is communication

I. Pain
II. Fear
III. Loss of sense of self
IV. Unmet need

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Documentation Techniques

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Documentation Techniques

1. DICE – (Describe, Investigate, Create, Evaluate) method
2. Who, What, Where, When, Why, and How
   a) Consider triggers
   b) include chart review
   c) Identify non-pharmacologic interventions
   d) Monitor and observe interventions

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Review Methods to Minimize Behaviors

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Methods to Minimize Behaviors

- If able, come back later.
- Listen, validate, and provide support.
- Incorporate interests and engage in activities.
- Follow routines.
- Gain trust and agreement.
- Allow to make choices.
- Check for pain.
- Help the individual develop relationships with you or others.
- Minimize time left alone.
- Anticipate and meet needs.
- Reduce stressors.

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Pharmacological Interventions

WHEN NON-PHARMACOLOGICAL METHODS DON'T WORK . . .

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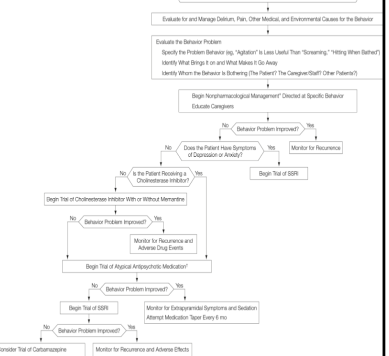
Recommended Algorithm for Management of Neuropsychiatric Symptoms of Dementia



Sink KM, Holden KF, Yaffe K. Pharmacological Treatment of Neuropsychiatric Symptoms of Dementia A Review of the Evidence. *JAMA.* 2005;293(5):596–608. doi:10.1001/jama.293.5.596

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Pharmacological Interventions

- Only Appropriate for:
  - Psychosis
  - Depression
  - Anxiety
  - Pain
- There are <u>no</u> drugs with an FDA approval for treatment of BPSD (Behavioral and Psychological Symptoms of Dementia)
  - Used off-label
    - For "Safety"

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Psychosis

Typical Antipsychotics
- No evidence of benefit of one over another
- Concern with EPS
- Black Box warning

Atypical Antipsychotics
- Risperidone and Olanzapine have the most support in randomized controlled trials (RCTs)

Side effects, BBW

Start low – Go Slow

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Psychosis

Pimavanserin
- Indicated for Psychosis associated with Parkinson's Disease

Seroquel 25mg
- Frequent admission from Hospital with a bedtime order

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Depression

Antidepressants
- Celexa has the most support in RCTs
- SSRIs as a class were found beneficial for depression in dementia patients
- Trazodone 12.5mg-25mg sometimes works in place of an antipsychotic or benzodiazepine for agitation and anxiety

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Anxiety

Benzodiazepine
- Limited studies in the treatment of NPS
- Significant cognitive impairment, falls, sedation
- Limit use to acute behavioral crisis

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Anticonvulsants

Valproic Acid
- Studies have not shown benefit
- Increased risk of mortality

Carbamazepine
- Only small studies for agitation

Side Effects
- Hepatitis, Pancreatitis, blood work changes

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Cholinesterase Inhibitors and Memantine

Primary treatment for Alzheimer's Disease
- There is some study support for benefit to BPSP – a VERY small reduction

Side Effects
- GI side effects
- Bradycardia

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Pain

Pain Assessment

- Utilizing an appropriate pain scale and treatment for pain may result in decreased agitation and BPSD

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Drugs to avoid in dementia

Side Effects of Anticholinergic Medications

Blood pressure, increased
Breathing difficulty, changes
Clumsiness or unsteadiness
Convulsions
Digestive system changes, e.g.,
- Bloating
- Bowel motility, decreased
- Constipation
- Ileus, paralytic/adynamic
- Nausea or vomiting
- Swallowing difficulty with dry mouth

Mental status/behavior changes, e.g.,
- Distress, excitement, nervousness
- Attention, impaired
- Cognitive decline
- Confusion/disorientation
- Hallucinations
- Memory loss
- Restlessness or irritability

Delirium
Dizziness or Drowsiness
Fever
Headache
Heart rate, increased
Lethargy, fatigue
Mucous membrane dryness: mouth, nose
Muscle weakness, severe
Speech, slurring
Skin, changes
- Dryness
- Sweating, decreased
- Flushing
- Warmth, excessive

Vision impairment, changes in acuity
- Blurring
- Glaucoma, worsening
- Eye pain
- Light sensitivity

Urinary retention or difficulty

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Diphenhydramine (Benadryl)

- Antihistamine
- Anticholinergic -- "dries you up"
- Anticholinergic side effects are:
  - Dry Brain -- confusion
  - Dry Mouth – can't eat
  - Dry Eyes -- blurry vision
  - Dries up urine -- urinary retention
  - Dries up bowels - constipation
- Better choice is Trazodone 50 mg po qhs for insomnia

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As a comparison, in another study of NH residents, drug levels in excess of 0.83 ng/ml of atropine equivalents were shown to have a significant effect on the capacity for self care in demented elders.

**the levels are likely to underestimate antimuscarinic effects since potentially active metabolites of each parent compound were not assayed.*

Tune L, Carr S, Hoag E, Cooper B.A. Anticholinergic Effects of Drugs Commonly Prescribed for the Elderly: Potential Means for Assessing Risk of Delirium. Am J Of Psych Oct 1992; 149, 10;1393-1394.

TABLE 1. Anticholinergic Drug Levels in 25 Medications Ranked by the Frequency of Their Prescription for Elderly Patients

Medication[a]	Anticholinergic Drug Level (ng/ml of atropine equivalents)
1. Furosemide	0.22
2. Digoxin	0.25
3. Dyazide	0.08
4. Lanoxin[b]	0.25
5. Hydrochlorothiazide	0.00
6. Propranolol	0.00
7. Salicylic acid	0.00
8. Dipyridamole	0.11
9. Theophylline anhydrous	0.44
10. Nitroglycerin	0.00
11. Insulin	0.00
12. Warfarin	0.12
13. Prednisolone	0.55
14. Alpha-methyldopa	0.00
15. Nifedipine	0.22
16. Isosorbide dinitrate	0.15
17. Ibuprofen	0.00
18. Codeine	0.11
19. Cimetidine	0.86
20. Diltiazem hydrochloride	0.00
21. Captopril	0.02
22. Atenolol	0.00
23. Metoprolol	0.00
24. Timolol	0.00
25. Ranitidine	0.22

[a] At a 10^{-8} M concentration.
[b] A digoxin compound.

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Mood Stabilizers

Mood Stabilizers
- Valproate didn't appear to be effective for NPS of dementia
  - Shown to have many more adverse reactions than placebo
- Carbamazepine
  - Not recommended due to lack of evidence
  - Black box warning
  - Drug interactions
- Lithium
  - No published RCTs

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Key Takeaways . . .

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BPSD is

- Prevalent
- Can be Severe
- Burden for Caregivers
- Difficult to Treat
- Impairs Quality of Life

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Where Do We Go From Here?

Is there Danger?

Start with Non-pharmacological Treatments

Then . . . Choose wisely

- Start Low – Go Slow

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