

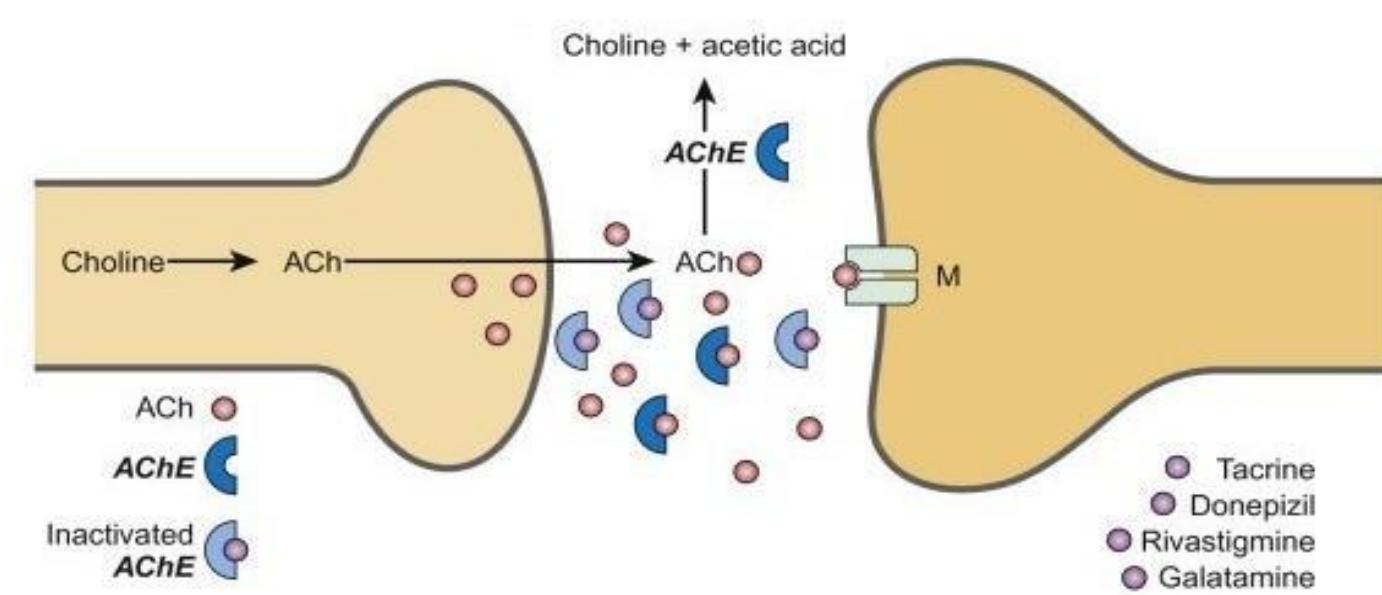
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## Background

- Currently there is estimated to be over 46 million people living with dementia worldwide which is expected to increase to 131.5 million by the year 2050.<sup>1</sup>
- Cholinesterase inhibitors (CHEIs) are a class of medication indicated for mild to moderate Alzheimer's disease to delay the breakdown of acetylcholine, and can have mild improvements in cognitive function, behavior, and activities of daily living.<sup>2</sup>

### Cholinesterase Inhibitors



- Guidelines state that CHEIs should be deprescribed in patients with severe dementia or at end of life.<sup>3</sup>
- Guidelines also recommends a slow taper of CHEIs with close patient follow up due a possible withdrawal syndrome.<sup>3</sup>

## Objective

This study aims to estimate the prevalence of patients admitted to a PCU with a primary diagnosis or co-morbidity of dementia and on a CHEI. It will also examine the time and rationale at which a CHEI was discontinued in relation to the patient's time of death. The goal of this study is to determine whether these patients were tapered off their CHEIs according to current deprescribing guidelines to improve overall patient care at the end of life.

## Methods

- This study is a descriptive retrospective chart review using clinical charts of patients admitted to a PCU with either a primary or comorbid diagnosis of dementia, for the 5-year period of January 1, 2015 to June 1, 2019.
- A chart review was conducted to collect patient demographics, admission CHEI medication, along with dose and route, whether the CHEI was tapered and/or discontinued during their PCU stay, and the reason for discontinuation.

## Results

Table 1. Patient Characteristics

Characteristics	N = 36
Age, year, mean (SD)	85.5 (6.9)
Gender, n (%)	
Male	16 (44.4)
Female	20 (55.6)
Admission source, n (%)	
Acute Care Hospital	9 (25)
Post-Acute	<5 (11.1)
Home	15 (41.7)
Long Term Care	5 (13.9)
Retirement Home	<5 (8.3)
Prior Palliative Care Consult, n (%)	
No	15 (41.7)
Yes	21 (58.3)
Stage of dementia, n (%)	
Mild	<5 (5.6)
Moderate	21 (58.3)
Severe	13 (36.1)
Primary Diagnosis, n (%)	
Cancer	23 (63.9)
Non-cancer	<5 (11.1)
Dementia	9 (25)
Medication and dose at time of admission, n (%)	
Donepezil 5mg	10 (27.8)
Donepezil 10mg	21 (58.3)
Galantamine 16mg	5 (13.9)
Admission PPS*, n (%)	
10-20%	5 (13.9)
30%	19 (52.8)
40%	12 (33.3)
Discharge PPS, n (%)†	
10%	22 (71.0)
20%	7 (22.6)
30-40%	<5 (6.4)

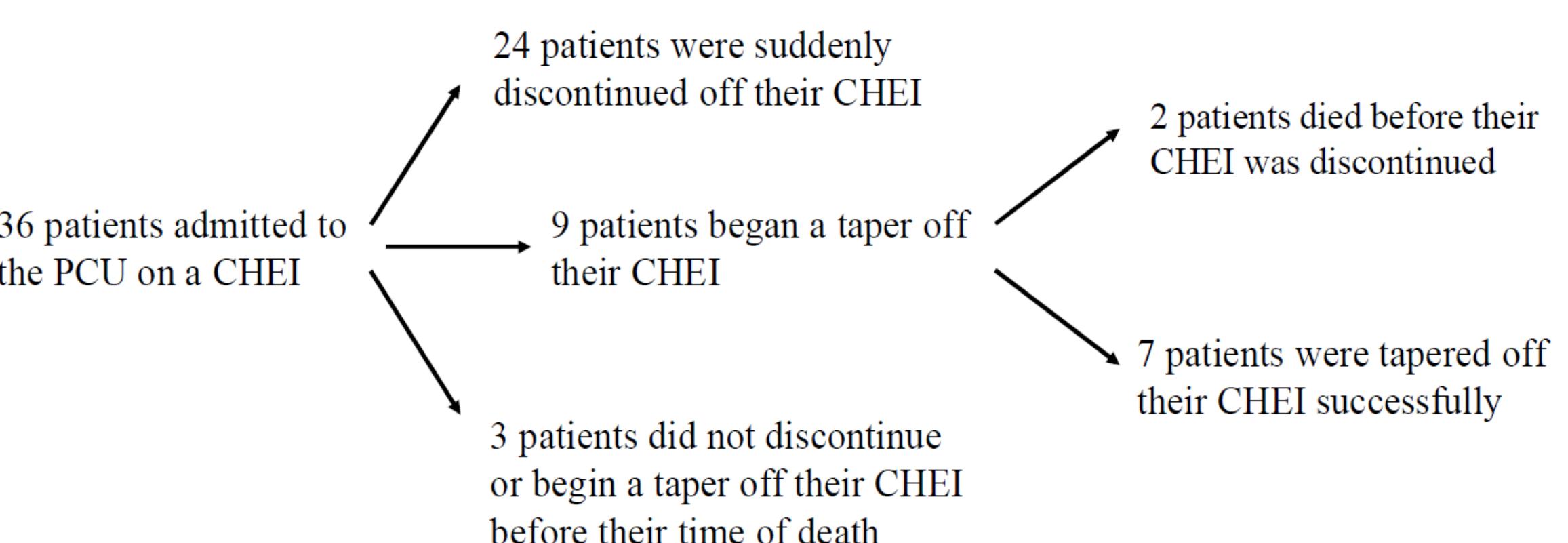


Figure 1. Outcome of Cholinesterase Inhibitor (CHEI) for patients admitted to a Palliative Care Unit (PCU).

- A total of 36 patients were admitted to the PCU with dementia on a CHEI (prevalence of 2.3%).
- The average age was 85.5 years with 56% of participants being female.
- The median length of stay was 21 days.
- For 31 of these patients, their CHEI was discontinued, only 7 of which had a taper.
- Of the 24 patients who discontinued their CHEI suddenly, 10 patients had an order to discontinue their CHEI in the last 2 days before their date of death.
- The median number of days from admission to discontinuation of the CHEI was 17 days (95% CI 8.0 to 29.0 days).
- The main reason for discontinuation was started as "no oral route" which occurred in 21 patients (67.7%). In 10 patients (32.3%), the reason for CHEI discontinuation was started as "risks outweighed the benefits" of being on a CHEI.

## Conclusions

- This study suggests that although patients admitted to a PCU with dementia have their CHEI discontinued, the discontinuation was done without a taper.
- More so, it appears in many cases the CHEIs were continued through the active stage of dying, which may relate to family wishes or a sudden decline in functional status.
- Considering the shorter length of stay for these patients on the PCU, it is surprising that CHEIs were not tapered earlier in the illness trajectory.
- Future work should explore reasons why PCU physicians are mostly late to taper CHEIs for patients admitted with dementia.

### References:

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- Reeve E, Farrell B, Thompson W, et al. Evidence-based clinical practice guideline for deprescribing cholinesterase inhibitors and memantine. Med J Aust 2019;210:174-179.

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