ICU Delirium: We can make a difference !

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Disclosure

- Dr Kresevic has no actual or potential conflict of interest in relation to this presentation
- Any views or opinions presented are solely those of Dr Kresevic and do not necessarily represent those of the Veterans Administration or University Hospitals
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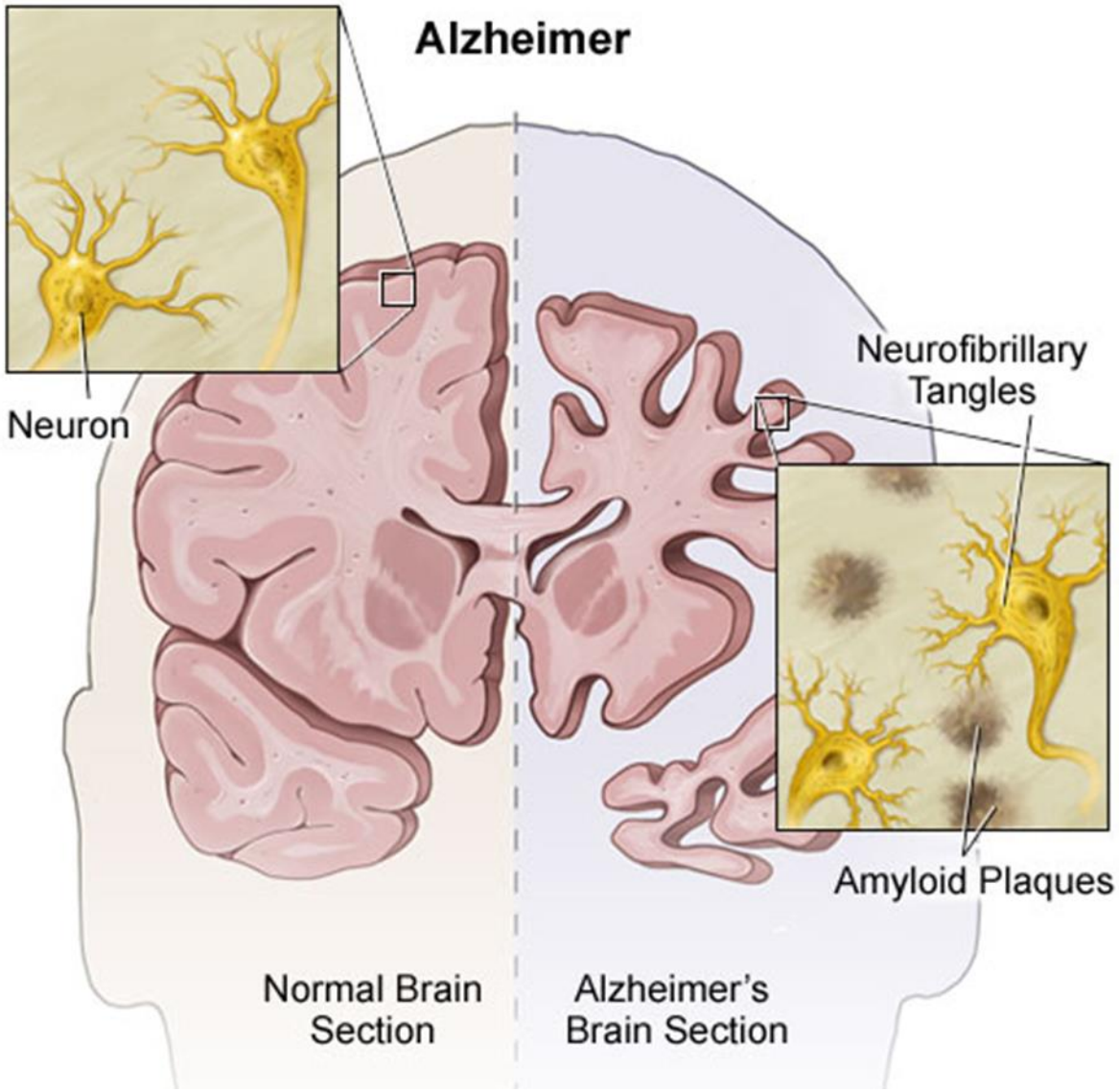
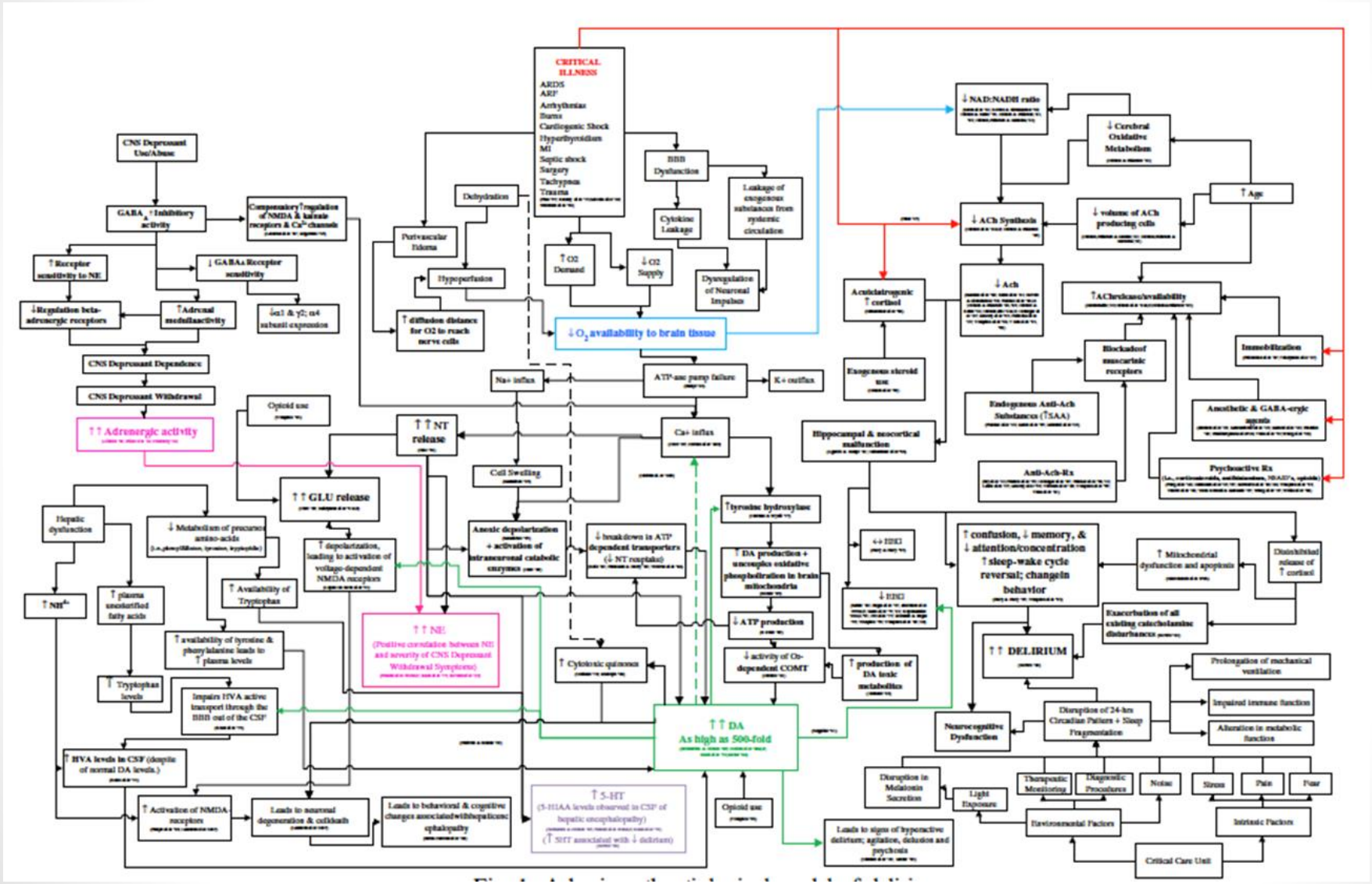

Alzheimer
Neuron
Neurofibrillary Tangles
Amyloid Plaques
Normal Brain Section
Alzheimer's Brain Section

Proposed Pathophysiology



Maldonado, Crit Care Clinic 2008; 24:789-856

Delirium (Pathophysiology)

Proposed Theories

- Neurotransmitters (dopamine; gamma-aminobutyric acid; acetylcholine)
- Alteration in synthesis, release, inactivation resulting in excess dopamine, acetylcholine depletion
- Additional Neurotransmitter imbalances: serotonin imbalance, endorphin hyperfunction, increased noradrenergic activity

So What's the big deal

- Delirium is not normal-brain failure
- Not harmless 1/3 never return to baseline
- Meds negatively associated with outcomes

Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit

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Nursing assessment is Key

- RASS
- CAM each shift (don’t miss hypoactive)
- Pain assessment
- Find the causes and treat delirium
- Prevent permanent cognitive impairment
- Prevent deaths

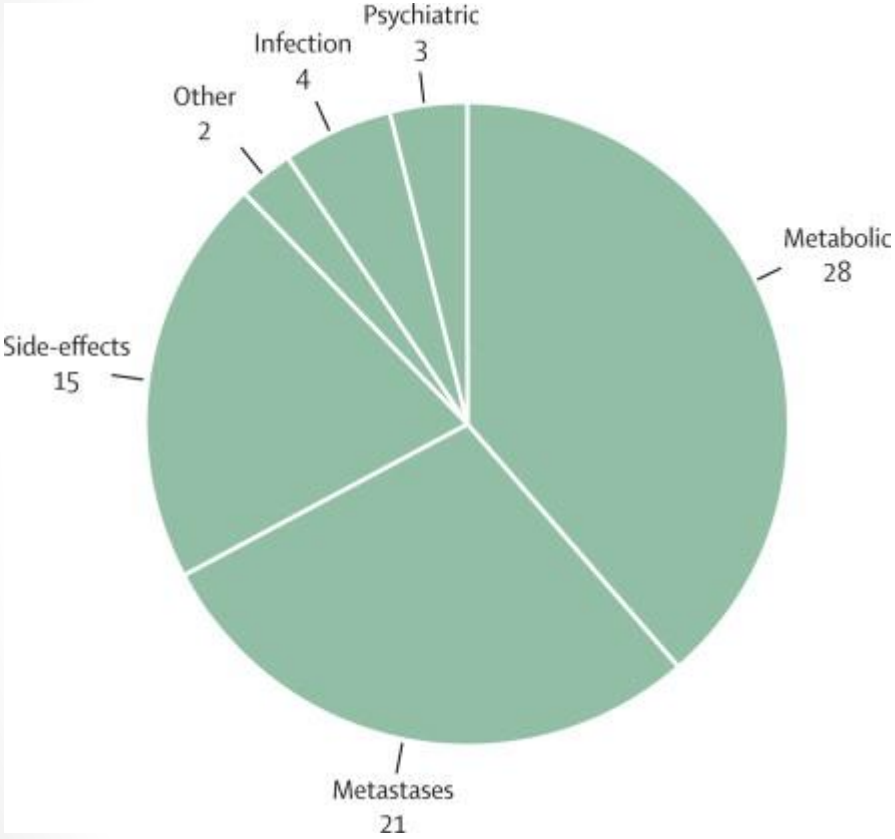
Benzodiazepines

"The irony is that these are the same medications physicians often use to manage agitated or delirious patients. This practice, even if immediately effective in tranquilizing a patient may, in the long run, aggravate and perpetuate the syndrome of delirium."

Maldonado. Crit Care Clin 24 (2008):657-722

	Depression	Delirium*	Dementia
General population	Minor depressive symptoms 3-26%		5% of 65+ adults 50% of 85+ adults
Hospitalized patients	Minor depressive symptoms 23%	10-15% on admission 10-40% in-hospital (new onset) 43-61% of hip surgery patients 31% of older adults admitted to medical intensive care units 83% of mechanically ventilated patients (all ages)	25%
	Depression + dementia 22-54%	Delirium + dementia 22-89%	

Causes of Delirium



- Opioid toxicity can cause delirium but in hip-surgery patients delirium is nine times more frequent if their post-operative pain is undertreated (Morrison *et al*, 2003).
- Sleep deprivation
- Electrolyte imbalance
- Use of physical restraints
- Visual or hearing deficits
- History of stroke, HF, epilepsy, renal failure, liver disease, HIV, dementia

Delirium Risk Factors

Predisposing

- Age 75 & older
- Co-morbid conditions
- ETOH history
- Orthopedic surgery
- >5 medications
- History of dementia
- Functional impairments
- Sensory deficits—hearing, vision loss
- Inactivity

Delirium: other names…

- Metabolic encephalopathy
- Acute organic brain syndrome
- Acute confusional state
- ICU psychosis: treated as normal occurrence in ICU
- Psychosis
- Sundowning
- Cerebral insufficiency
- Post-partum psychosis

Delirium: DSM5

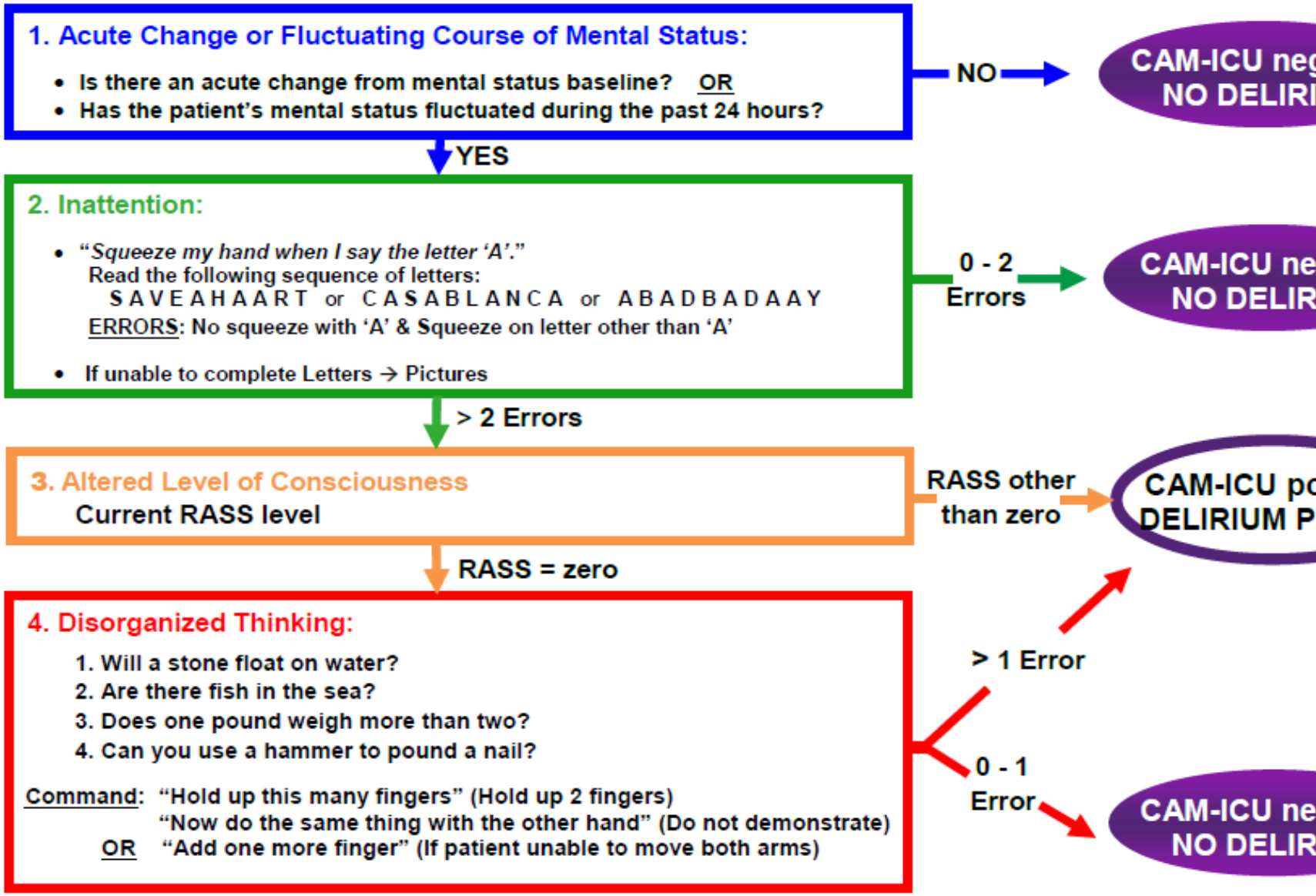
- Disturbance of attention,
- develops over short time,
- change from baseline,
- accompanied by changes in cognitive domain, such as memory, disorientation, language, perception, that cannot be accounted for by pre-existing or other neurocognitive disorders;
- occurs in context of severely reduced level of arousal

APA, 2013

Delirium, Dementia or BOTH

1. Cognitive impairment increases risk of delirium nearly three-fold (Inouye et al. Annals Int Med. 1993)
2. 22-89% of delirium cases are superimposed on dementia (Fick et el. J Am Geriatr Soc. 2002)
3. 60% of patients who experience delirium while hospitalized develop dementia (Witlox et al. JAMA.2010)
4. Patients with delirium and dementia with "neuropsychiatric symptoms" have similar poor outcomes (Holtta et al. Am J Geriatr Psychiatry.2011)

Confusion Assessment Method for the ICU (CAM-ICU) Flowsheet



ABCDEF Bundle

- A Assess manage pain
- B Both spontaneous breathing and awakenings
- C Choice of analgesia and sedation
- D Delirium assessment
- E Early Mobility
- F Family engagement

Interdisciplinary Rounds

- Face to Face Bedside rounds are invaluable, especially with the night nurse

- What is the RASS, is this where we want it
- What has the CAM been for the last 24 hours
- What medications Have we addressed pain,

- Is the family present
- Mobility plan of care

Managing Delirium

lots nurses can do

- Engage family: liberal visitation
- OOB

- Music
- Restraint alternatives-Busy boards, purse
- Clocks/ Calendar/ Assistive Devices
- Pain programs/ Constipation

Cares Distraction Supplies

- Restraint alternatives-Busy boards, fishing vests, puzzles, stress balls
- CD's for music
- DVD's for movies
- Early Mobilization
- Assistive Devices, hearing amplifiers, magnifying glasses
- Prism glasses