TBI-BH ECHO

Traumatic Brain Injury – Behavioral Health ECHO

UW Medicine | Psychiatry and Behavioral Sciences

TBI-BH ECHO 2026

Managing Psychosis after a TBI

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Speaker Disclosures

No Disclosures

- **The following series planners have no conflicts of interest:**
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Objectives

1. Recognize and Diagnose Psychotic Disorder due to TBI (PD-TBI)
2. Counsel Patients on Prognosis of PD-TBI
3. Start treatments for PD-TBI

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Case 1: Mr. N

- Mr. N, 42yo w/ no past medical/psych history, presents to your clinic for auditory hallucinations.
- Started a few months ago. Difficult to make out what they're saying.
- No changes in mood. Has always been a poor sleeper.
- Reports that he's been worrying and bothered by the voices.

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Case: Mr. N (part 2)

- What more would you like to know?

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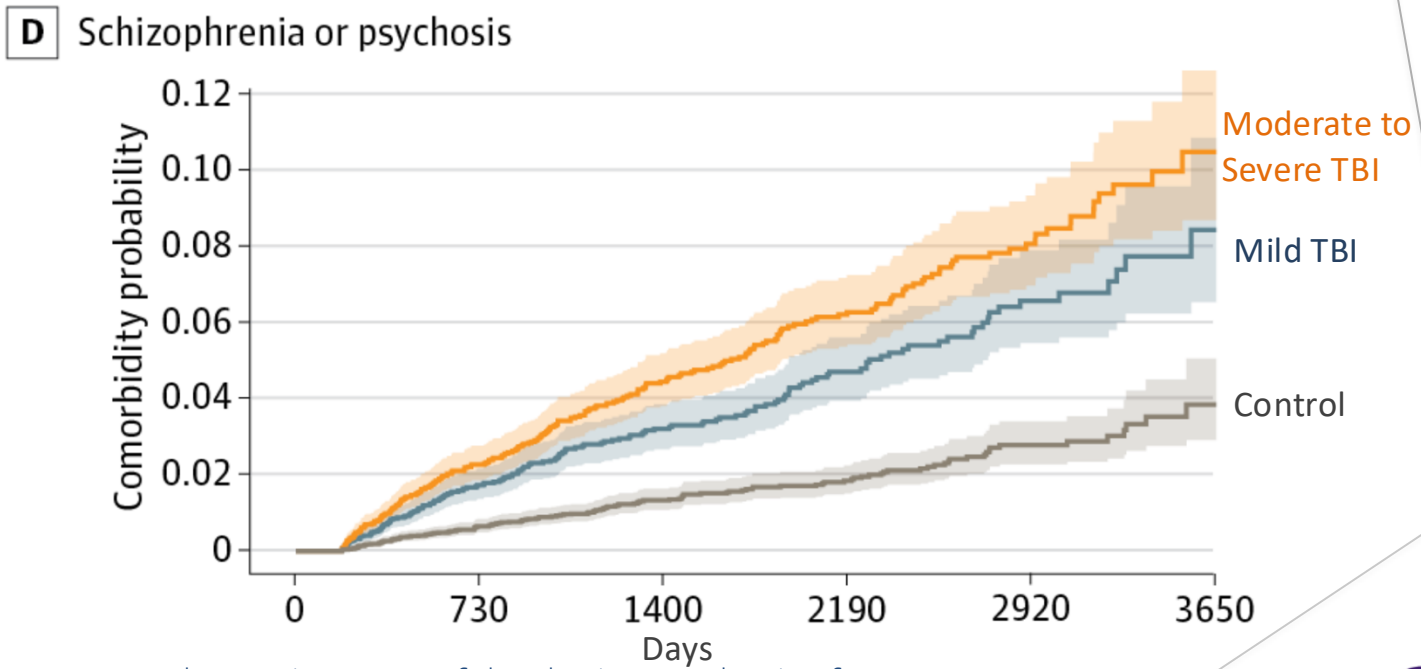
Case: Mr. N (part 3)

- Medical history: A year ago he had a fall. +LOC, CT scan was normal in the ED.
- On interview, he's linear and slightly anxious.
- Asks you if he's going to "go crazy"

TBI increases the risk for Schizophrenia and Psychosis



A Kaplan-Meier curve of developing psychosis after TBI

Source: Halabi 2024

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PD-TBI vs Schizophrenia

- TBI is a risk factor for schizophrenia
- TBI can also lead to PD-TBI
- Psychotic disorders are a risk factor for TBI

Propose Mechanism of PD-TBI

- **Stress-Diathesis model**
  - **Patients with PD-TBI have family history of psychotic disorder**
  - **Disruption of dopaminergic system or hippocampal circuity**
  - **Neuroinflammation**

Characteristics of Psychotic Disorder due to TBI

- Can present with hallucinations or delusions
- Can present with cognitive impairment
- Presentation of psychotic symptoms can happen within the first year; median of 4-5 years out.
- 1/5 of patients sustained posttraumatic seizures
- More likely to have neurological signs

Comparing PD-TBI and Schizophrenia Characteristics

	PD-TBI	Schizophrenia
Prodromal symptom	Present	Present
Age of Onset	20s	20s
Presences of Negative Symptoms	37%	50-90%
Thought Disorganization	Low	High

Takeaway Points #1

- PD-TBI diagnostic overlap with schizophrenia and can be hard to diagnose due to delay time-course
- Have suspicion when there's little to no negative symptoms and focal neurological symptoms

Case 1: Mr. N (part 3)

- **What diagnostic tests do you want to do?**

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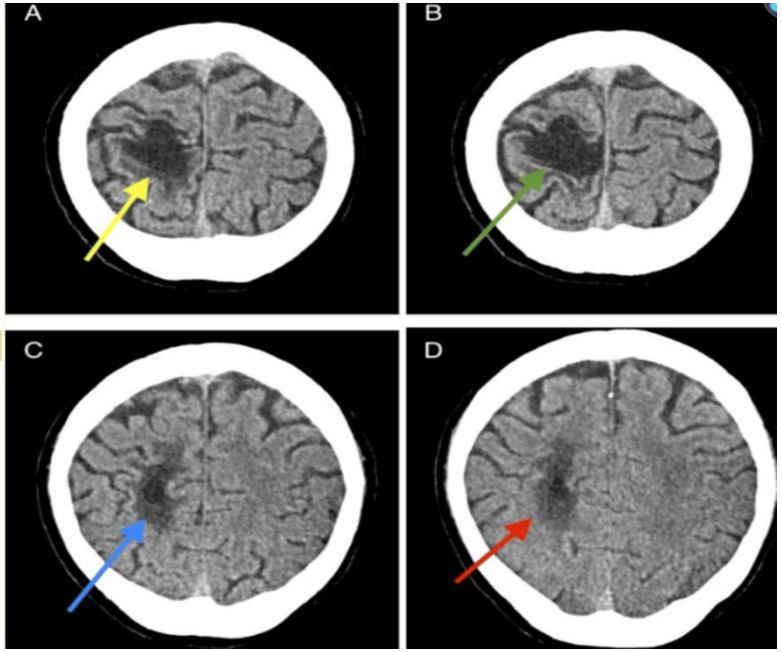
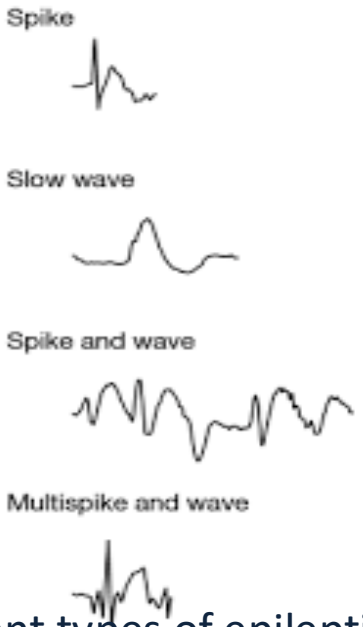
Comparing PD-TBI and Schizophrenia Characteristics

	PD-TBI	Schizophrenia
Prodromal symptom	Present	Present
Age of Onset	20s	20s
Presences of Negative Symptoms	37%	50-90%
Thought Disorganization	Low	High
Focal abnormalities on CT	100%	6-9%
EEG Findings	77%	20-60%

Imaging finding in PD-TBI



CT Head w/o Contrast of a Patient with TBI-Psychosis
Source: Hanna 2024



Different types of epileptiform discharges

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Still Important to do First Break Psychosis Work-up

- Thorough Neuro exam
- Screen for other causes:
  - BMP, CBC, LFT, TSH, Syphilis screening, HIV, B12, ESR and ANA, UA, Utox
  - CT Head, EEG?
- To guide treatment:
  - ECG, Lipid Panel, Urine Pregnancy test

Takeaway Points #2

- Same Work-up for new onset psychosis
- Consider CT and EEG if there is suspicion for PD-TBI

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Prognosis

- PD-TBI is likely a chronic process
- Very Responsive to medication

Treatment

- Starting low and going slow
- First line treatment is antipsychotics
  - Olanzapine 2.5mg QHs and Quetiapine 25mg QHs
  - Risperidone 1mg QHs
  - Monitoring lipids and blood sugar
- Anticonvulsants if epileptiform activity are present

Cognitive Behavioral Therapy for Psychosis (CBT-P)

- There's no direct evidence for CBT-P for patients with TBI
- CBT-P has lower barrier of executive function
- Provides a framework for discussing psychosis

Engaging patients in a CBT-P Frame

- **Normalize**
  - Up to 6% of people experience psychotic symptoms
- **Validate**
  - Acknowledge emotions and fears
- **Collaborate**
  - Goal is to reduce distress and increase function
  - Wellness plan

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