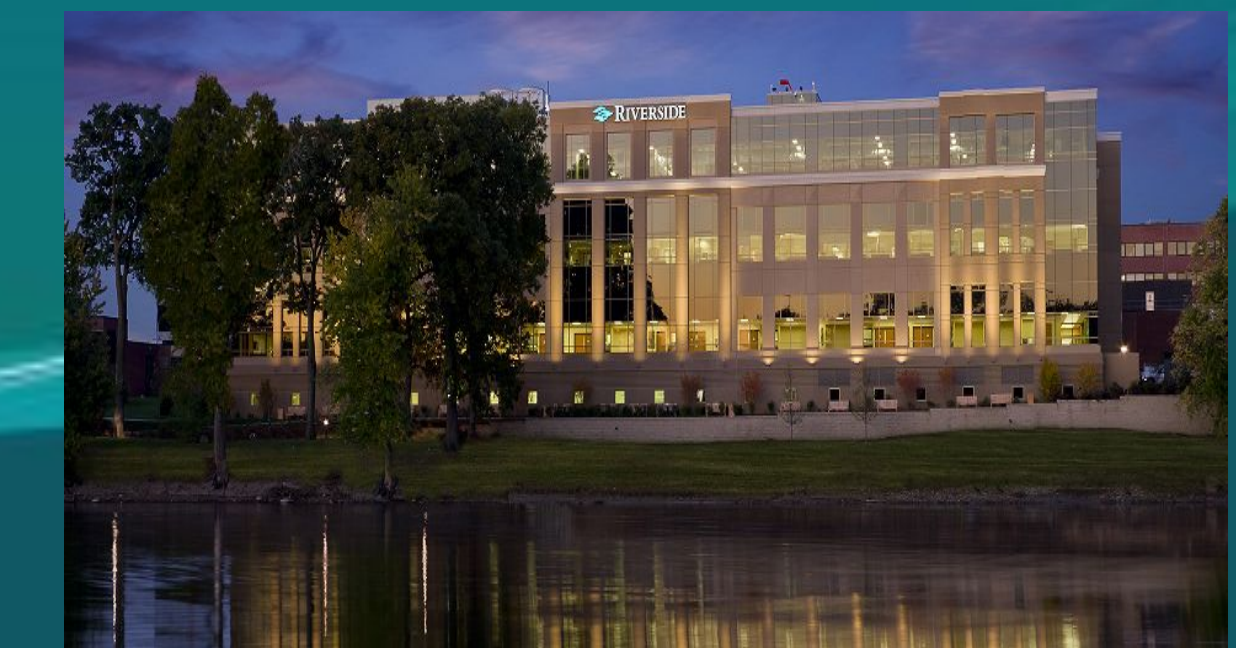




Psychiatric Implications of Recurrent Insulin Overdose in a Patient with Type 1 Diabetes Mellitus and Prior COVID-19 Infection:

Ashley Clark MD, MS Rehan Saini, DO, MS, Mayurika Pise, MD, Julia Beck OMS-3
Riverside Medical Center, Kankakee, Illinois



Disclosure Information Nothing to disclose

Background

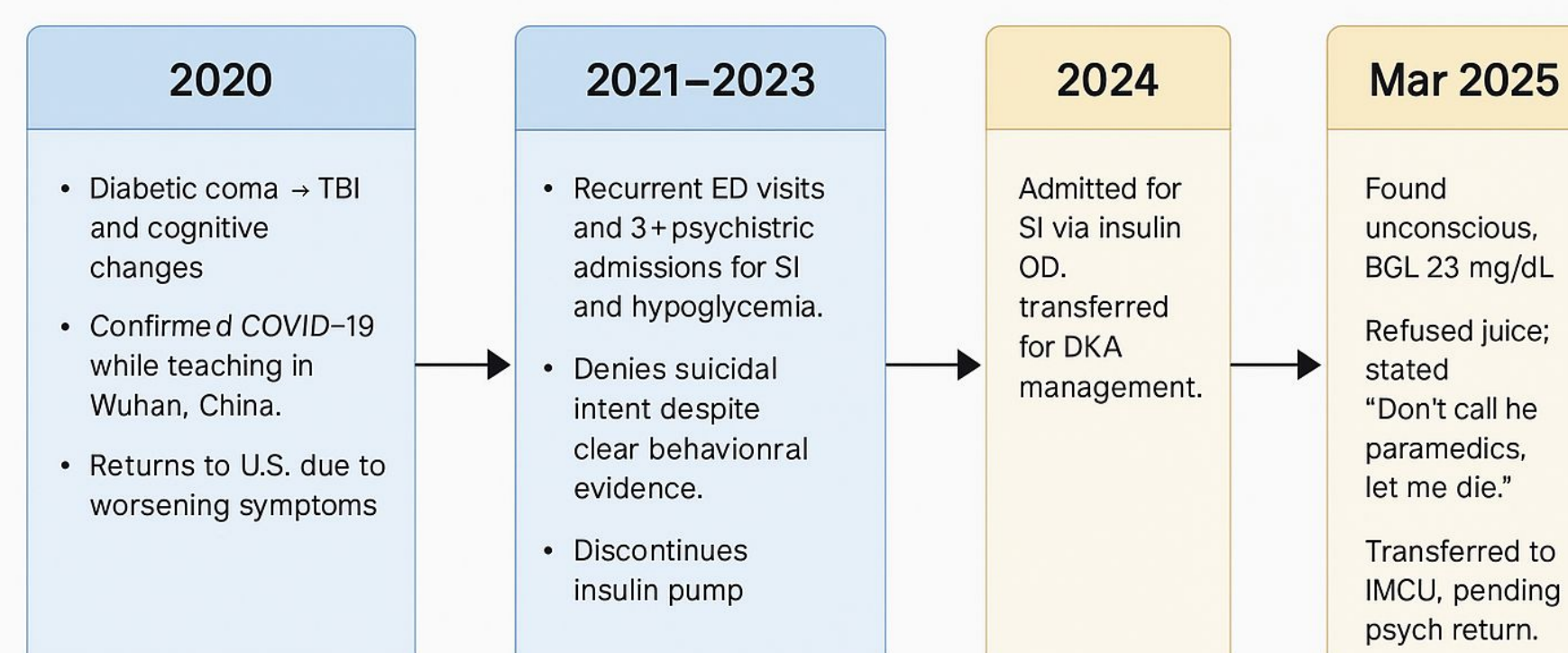
- Intentional insulin overdose (OD) as self-harm is a significant psychiatric concern, particularly in patients with co-existing Type 1 Diabetes Mellitus (T1DM) and severe mental illness.
- Admission:
 - Found unconscious at home (BGL: 23 mg/dL).
 - Refused juice and did not request alternatives.
 - Told his mother, "Don't call the paramedics, let me die."
- Medical & Psychiatric Evaluation:
 - Initially admitted to psychiatry; transferred to IMCU for diabetic ketoacidosis (DKA) due to laboratory abnormalities (POCT glucose: 506, pH: 7.20, Na: 131, K: 5.6, PCO₂: 22).
 - Exam: Slow, delayed responses; stereotypic hand movements; slurred speech.
 - Repeated: "I don't need to be here. I don't know how low sugar got me here."

Case Presentation

- Patient: 38-year-old male with T1DM, cognitive changes after diabetic coma in early 2020 and reported historical bipolar disorder with multiple suicidal attempts via intentional overdose with insulin regimen.
- History: Multiple documented hospitalizations (more than 10) via insulin OD, but patient denies self-harm intent, complicating psychiatric assessment.
- Behavioral Concerns: impulsive behaviors, preoccupation with maintaining very low blood glucose levels (below 60) and history of aggression toward family when insulin is restricted.
- COVID-19 Factor: Confirmed early COVID-19 case in Wuhan, China, raising concerns about long-term neuropsychiatric effects impacting cognition and emotional regulation.
- The patient worked as a chemistry teacher in Wuhan, China from 2013 to 2020. After a hypoglycemic coma in February 2020, he developed memory impairment and behavioral issues, leading to job termination by April 2020.

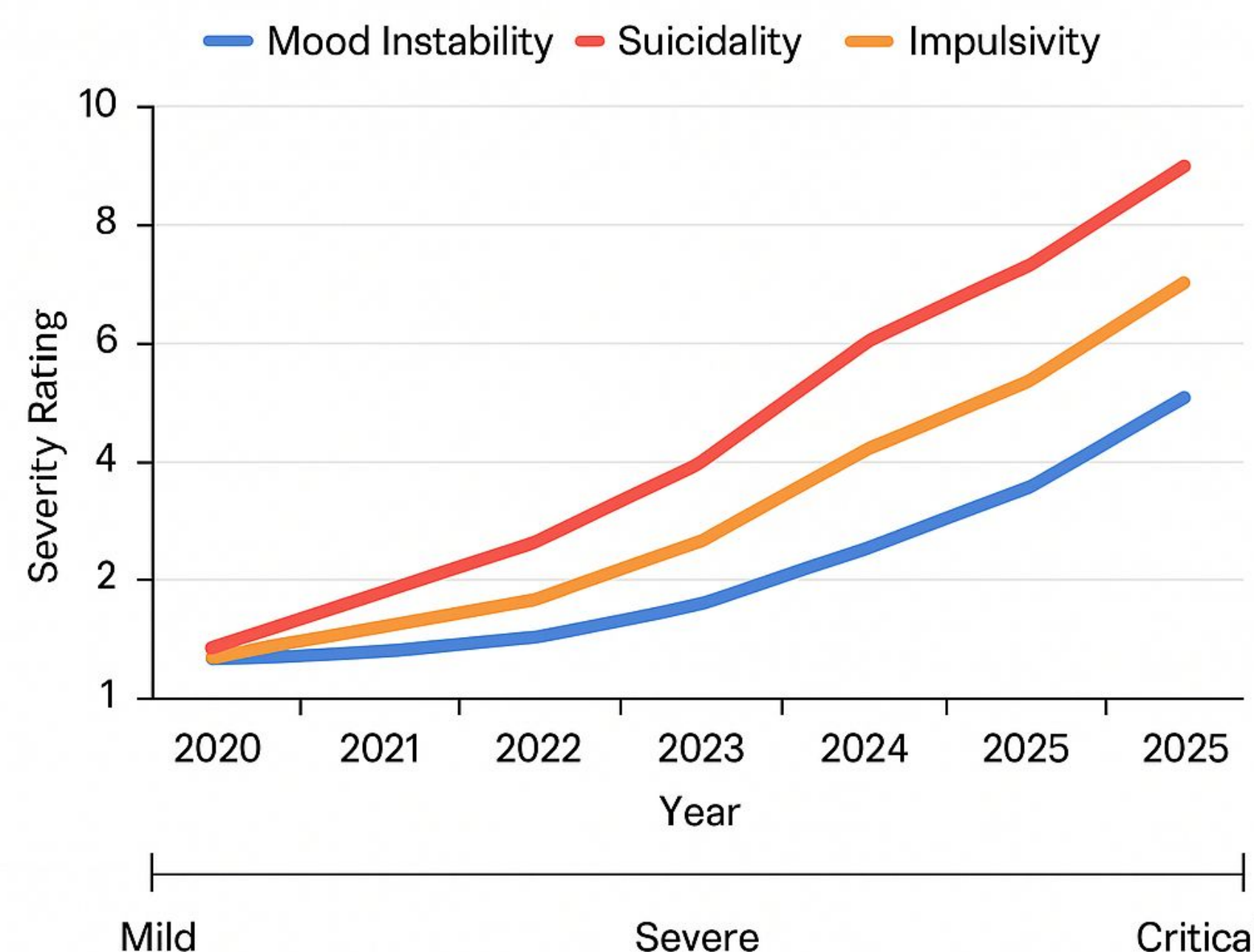
Images

Case Timeline (2020–2025)



Case Timeline - A chronological overview of key events—including brain injury, recurrent insulin overdoses, psychiatric hospitalizations, and early COVID-19 infection during the patient's time teaching in Wuhan, China—highlighting patterns of crisis and intervention.

Psychiatric Symptom Trend



Psychiatric Symptom Trend – Graphs based on chart reviews and psychiatric evaluations from 2020 to 2025.

Severity Rating Scale:

- 1 (Mild): Minimal symptoms
- 2-4 (Moderate): Manageable symptoms
- 5-7 (Severe): Significant distress
- 8-10 (Critical): Urgent intervention needed

Decision-Making

- Inpatient psychiatric stabilization after medical management.
- Supervised insulin administration to prevent self-harm.
- Concern for obsessive-compulsive disorder vs obsessive-compulsive personality disorder.
- The preoccupation with Insulin regimen started after patient's diabetic coma post covid-19 infection concurrent with MDD w/Psychotic Features.
- Therapy:
 - CBT for suicidality and self-harm; Exposure Therapy for OCD
 - DBT for emotional regulation and impulse control.
 - Family therapy to address conflict and safety.
- Medications:
 - SSRIs/SNRIs for depression and OCD
 - Both classes of medication have shown to be effective in MDD and OCD
 - Mood stabilizers (Lithium, Valproate) for emotional dysregulation and impulsivity.
 - Atypical antipsychotics for agitation/impulsivity and adjunct for OCD/OCPD.

Long-Term Management & Prognosis

- Regular psychiatric follow-up along with endocrinology follow-up.
- Structured diabetes management (possible insulin pump reintegration).
- Neuropsychological Evaluation
- Ongoing assessment for personality pathology.

Conclusions

- Multidisciplinary care is essential for managing recurrent insulin overdose.
- Early psychiatric intervention and diabetes management reduce suicide risk.
- Denial of suicidal intent despite repeated attempts complicates assessment.
- OCD has been linked to long COVID in recent studies.
- Ongoing research is needed to understand long-term psychiatric effects of COVID-19 in high-risk groups.