Real World Considerations for Pediatric Brexanolone Infusion

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Background

- Postpartum depression confers ↑ risk of poor bonding, ↓initiation of breastfeeding, limited prenatal care, ↑ substance use, and poor nutritional status [1]
- Brexanolone is a Food and Drug Administration (FDA) approved 60-hour infusion for postpartum depression in patients 15 years and older [2]
- Studies on its use in pediatric populations regarding safety and tolerability are limited
- At our institution, Brexanolone is administered by consultation-liaison (CL) psychiatrists in the obstetrical hospital

Aims

- We present a real-world case of an adolescent who received the infusion:
  - Highlighting the medication's potential use as a treatment option for teenagers
  - Barriers to use
  - Our real-time experiences troubleshooting logistical challenges and enacting policies around it

Case Presentation

ID:

- 17-year-old G1P1 female

Past Medical History:

- Sickle cell carrier

Past Psychiatric History :

- Diagnoses: MDD, PTSD
- Hospitalizations: Multiple starting at age 9 for disruptive behaviors
- Current medications: None
- Medication trials: Lurasidone, Quetiapine, Venlafaxine, Lithium, Lamotrigine, Trazodone, Mirtazapine, Guanfacine, Amphetamine, Dextroamphetamine, Aripiprazole, Hydroxyzine, Paroxetine
- No prior suicide attempts
- SIB in the form of cutting (to feel pain) as an adolescent
- Trauma: Neglect, physical, and sexual as child
- Different placements throughout childhood

Social History:

- Lives with mom, stepfather, and siblings around 2.5 hours away from hospital
- Education: Enrolled in 9th grade Cyber school

Family Psychiatric History:

- Father: Substance use disorder

Substance Use History:

- Tobacco: Vapes nicotine. Denies cigarettes or chewing tobacco
- ETOH: Denies
- Drugs: Smokes cannabis occasionally for appetite stimulation

Clinical Course

Hospital Day 1:

- Admitted to obstetric hospital for IV Brexanolone
- Officially started on infusion at 14:54 PM

Hospital Day 2 AM:

- Tolerating infusion well with only some mild sedation

Hospital Day 2 PM (22:30):

- Thought about discontinuing treatment
- Overwhelmed by baby crying in room
- Felt like she did not have any support
- Thought the baby could be in the newborn nursery
- After discussion, agreeable to continue infusion

Hospital Day 3 AM:

- Officially decides to discontinue Brexanolone
  - Missing family and home with minimal support
  - Triggered in hospital due to past trauma of past placements
  - Distress around providing care for newborn
- Extensive troubleshooting:
  - Discussion with patient and mother
  - Nonpharmacologic strategies for anxiety
  - Additional supportive measures from staff

Total infusion time: 43.5 hours (72.5%)

- Infusion stopped without tapering to monitor for sedation and other adverse effects
- Discussed discontinuation strategy with pharmacy, MFM, Sage pharmaceuticals, and other Brexanolone clinicians in our system
- Opted to start escitalopram with outpatient follow up

Discussion

Safety and Tolerability in Pediatric Patients

- Well tolerated with only mild sedation
- Safe to immediate discontinue if not tolerated

Social Support

- Lack of social support and childcare caused significant emotional distress impacting treatment duration
- Having hospital policies and additional resources for support could positively impact treatment duration and thus effectiveness of medication

Usage with Additional Psychiatric Comorbidities

- Previous studies only used for post partum depression
- Our patient also met criteria for PTSD, which could complicate effectiveness of Brexanolone
- Need more studies in complicated patients with multiple psychiatric comorbidities to post partum depression

Additional Hospital Policies and Resources to Support Pediatric Birthing Parents Including:

Parental or social support in the hospital	Development and reinforcement of mindfulness-based interventions	Comprehensive screening for trauma history with proactive development of a plan to support comorbid trauma-related disorders

Conclusion

- This case highlights important real-world aspects and considerations of Brexanolone infusion for patients under the age of 18
- Brexanolone is a safe overall well-tolerated medication in the pediatric population with similar minimal side effects to adult population [2]
- Need for more real-world studies:
  - Additional psychiatric comorbidities to postpartum depression that could complicate treatment duration or effectiveness of treatment
  - Safety of immediate discontinuation
  - Pediatric population

References