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Transplant Psychiatry: Role of the PMHNP, PTSD, & Bipolar Disorder

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Disclosures

We have no financial relationships or commercial interests pertaining to the material being presented today. We are not going to discuss any unapproved/investigational use of a commercial product. This presentation will provide a balanced view of therapeutic options and be free of promotional bias.

Presentation Agenda

- What is Transplant Psychiatry?
- The role of the PMHNP
- PTSD and Bipolar Considerations with Transplant
  - Prevalence
  - Diagnostic Criteria/Key Features
  - Assessment and Screening Tools
  - Treatment
    - Pharmacological Considerations
    - Non-Pharmacological Considerations
- Case Study
- Closing Thoughts
- Questions?

Transplant Psychiatry

- Identifying and treating mental health issues pre-transplant to help mitigate post-transplant complications.
- Mental health and support of the post-transplant patient.

Factors Impacting Mental Health

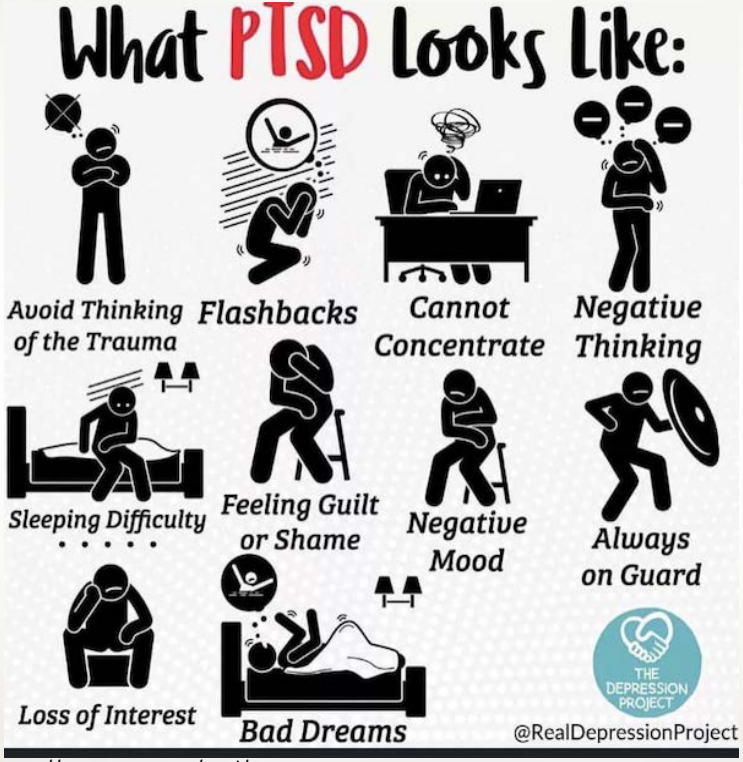
- Pre-Transplant Factors
  - Multiple hospital visits/appointments, loss of autonomy, fear of death, decreased quality of life due to medical conditions
- Post-Transplant Factors
  - Unmet expectations, multiple medications, fear of rejection, setbacks, survivor's guilt, side effects from steroids and immunosuppressants
- Why is identification and treatment important?
  - Improve Quality of Life
  - Increase medication adherence
  - Improve post-transplant outcomes and survival rates

Role of the PMHNP

- Assess
- Diagnose
- Treatment
  - Pharmacological treatment
  - Brief psychotherapy
- Refer
  - Psychotherapy, Neuropsychological testing, addiction services, etc.

https://cdn.sanity.io/images/0vv8moc6/psychtimes/f1c0a0f7e5634c25b539904eb5b75a64d3ba57a6-811x554.jpg/med-education_Tetiana_AdobeStock.JPG?fit=crop&auto=format

Post Traumatic Stress Disorder



https://www.nmac.org/ptsd/

Prevalence

- 3.5 % of the US population
- 2-5x higher in Transplant patients
- More than 25% will have some symptoms
- A systematic review found that an average of 16% of patients met criteria for PTSD 2 years post-transplant (all organs).

Differentials

- Effect of steroids/immunosuppressants
- Acute Stress Disorder
- Adjustment Disorder
- Substance Use

Risk Factors

- Female
- Younger Age
- Lower education level
- Prior Psychiatric illness
- Prior Traumatic experiences
- Prior diagnosis of PTSD
- Poor Social Support
- Longer ICU stay
- Complicated post-transplant course

https://www.cdc.gov/diabetes/basics/risk-factors.html

Why is it important?

- What kinds of issues do you think could arise if PTSD from transplant is left untreated?

https://www.scientificworldinfo.com/2021/03/importance-of-creative-thinking-in-life.html

- If untreated negative outcomes of PTSD post-transplant can include…
  - Worse mental health, decreased physical functioning, impaired social functioning, non-adherence to medication, decreased quality of life, higher reports of bodily pain, substance use, and increased risk for mortality.

Assessment Tools

- Primary Care PTSD Screen
  - If positive refer to psychiatry for further assessment and clinical interview.

In your life, have you ever had any experience that was so frightening, horrible or upsetting that, in the past month, you:*

1. Have had nightmares about it or thought about it when you did not want to?	Yes or No
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?	Yes or No
3. Were constantly on guard, watchful, or easily startled?	Yes or No
4. Felt numb or detached from others, activities, or your surroundings?	Yes or No

*A score of 3 or higher should prompt additional evaluation.
Source: Prins A et al. *Prim Care Psychiatry*. 2003.[18]

https://www.researchgate.net/figure/Th-e-4-question-Primary-Care-PTSD-Screen_tbl2_41416164

Trauma Informed Care

https://ttiinc.org/trauma-informed-care/

Pharmacological Treatments

- SSRI's are first line
  - Sertraline, escitalopram, citalopram may be preferable given less risk for interactions.
  - Fluoxetine CYP3A4 Inhibitor, higher potential for drug interactions.
- Prazosin
  - Can help nightmares, monitor blood pressure

- Mirtazapine (5HT2 Receptor Agonist)
  - Augmenting agent or second line
  - Helpful for depression, insomnia, low appetite
  - Minimal drug interactions
- Antipsychotics as augmenting agents
- SNRI's
  - Venlafaxine
  - Duloxetine; May be helpful in those with chronic pain
- Hydroxyzine
  - Useful for PRN anxiety, safer than benzodiazepines

Non-Pharmacological Interventions

- Individual Psychotherapy
  - CBT
- EMDR, Brain Spotting
- Mindfulness/Meditation
- Transplant support groups

https://www.everydayhealth.com/meditation/

Bipolar Disorder

Benjavisa Ruangvaree/Adobe Stock

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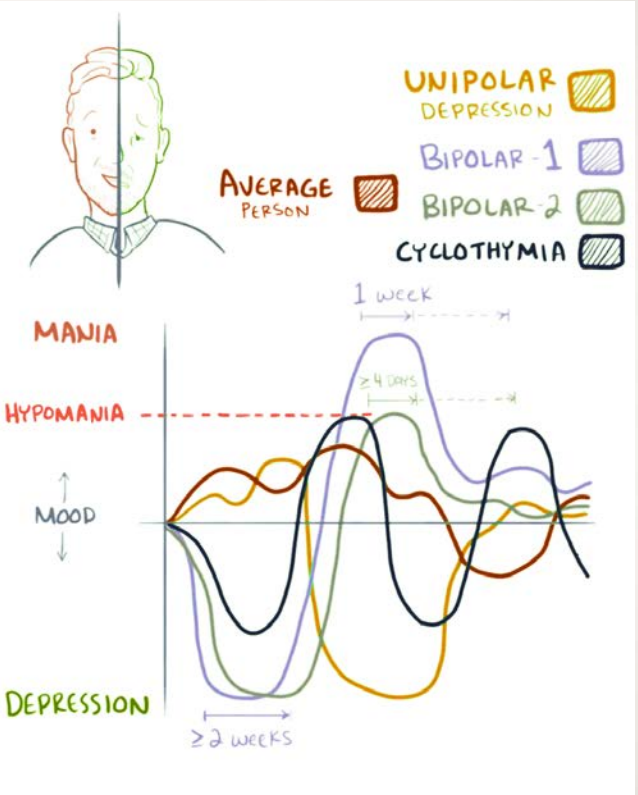
DSM 5 Criteria

	BD I	BD II	Cyclothymia
Main Symptom Criteria (Mania)			
Elevated or irritable mood	+	Often irritable	+
Increased activity or energy	Goal-directed	+	+
Increased self-esteem	+	+	+
Decreased need for sleep	+	+	+
Pressured speech	+	+	+
Distractibility	+	+	+
Increased risk taking behaviour (especially for those with comorbid BPD)	+	+	
Main Symptom Criteria for Depressive episodes (Same as MDD)		+	
Severity and duration of episodes			
(Hypo)Mania	Mania	Hypomania**	Sub-threshold Mania
Number of Symptoms	3–4 symptoms	3–4 symptoms	⩽ 3 symptoms
Duration of Episode	> 7 days	4–7 days	< 4 days
Impact on functioning	Disrupts social and occupational functioning or results in hospitalisation	Not severe enough to disrupt functioning or result in hospitalisation	Symptoms of (hypo)mania/ depression cause significant distress or impairment in functioning
Depression	Depression	Depression	Sub-threshold Depression
Number of Symptoms	> 5 symptoms	> 5 symptoms	⩽ 5 symptoms
Duration	2 weeks	2 weeks	< 2 weeks
Frequency of episodes	⩾1 manic episode*	>1 hypomanic + ⩾1 depressive episode	Fluctuating subthreshold hypomanic and depressive symptoms for >2 years (>1 year for children/adolescents)

Malhi, Gin & Bassett, Darryl & Boyce, Philip & Bryant, Richard & Fitzgerald, Paul & Fritz, Kristina & Hopwood, Malcolm & Lyndon, Bill & Mulder, Roger & Murray, Greg & Porter, Richard & Singh, Ajeet. (2015). Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders. Australian & New Zealand Journal of Psychiatry. 49. 1087-1206. 10.1177/0004867415617657.



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SIGE CAPS

The mnemonic SIGE CAPS is useful to remember the diagnostic criteria for major depressive disorder:

S–Sleep changes
I–Interest loss
G–Guilt (worthlessness)
E–Energy loss (fatigue)
C–Cognition/concentration difficulties
A–Appetite loss and/or weight loss
P–Psychomotor (agitation)
S–Suicidal ideations

https://www.hmpgloballearningnetwork.com/site/emsworld/article/10931747/managing-psychiatric-emergencies

DIG FAST

Use the mnemonic DIG FAST to remember the diagnostic criteria for manic episodes:

- **D**–Distractibility
- **I**–Indiscretions (excessive pleasure activities)
- **G**–Grandiosity
- **F**–Flight of ideas
- **A**–Activity increase
- **S**–Sleep deficits
- **T**–Talkativeness

https://www.hmpgloballearningnetwork.com/site/emsworld/article/10931747/managing-psychiatric-emergencies

Epidemiology

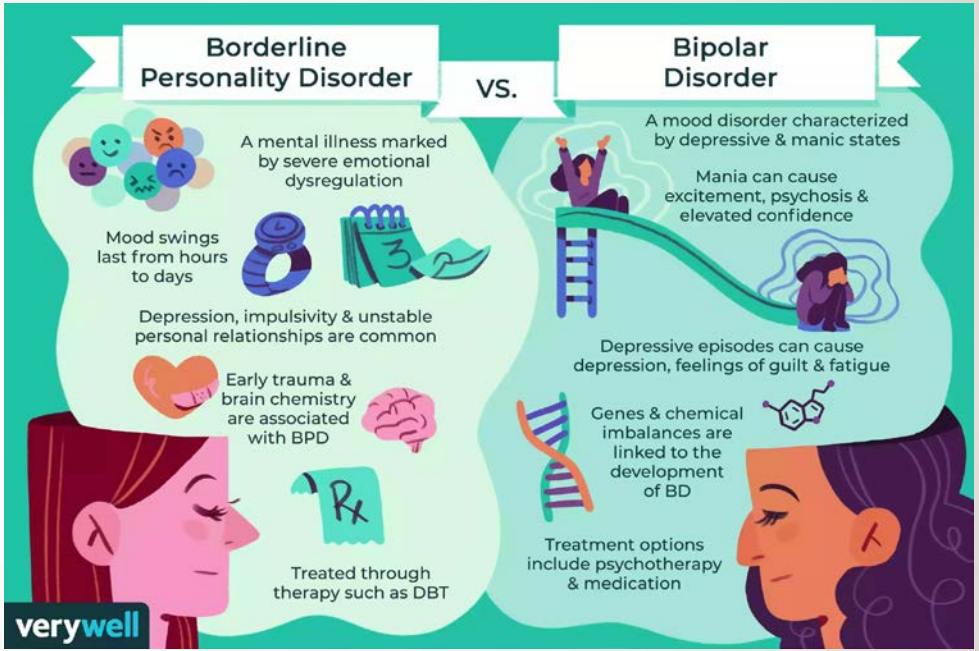
- Incidence and Prevalence
  - Lifetime prevalence 2.6-7.8%
  - Mean age of onset is 25-30 years old
  - No gender difference for diagnosis
- Etiology
  - Genetics
  - Stress
  - Biological factors

Comorbidities

- Substance use disorders (61%)
- Panic disorder (21%)
- Obsessive-compulsive disorders (21%)
- Social anxiety disorder
- Eating disorders

Differentials

- Substance/medication induced hypomania/mania
  - Prednisone
  - Tacrolimus
- Due to general medical condition
- Delirium
- Anxiety
- PTSD
- Personality Disorders



https://www.verywellhealth.com/bpd-vs-bipolar-5096132

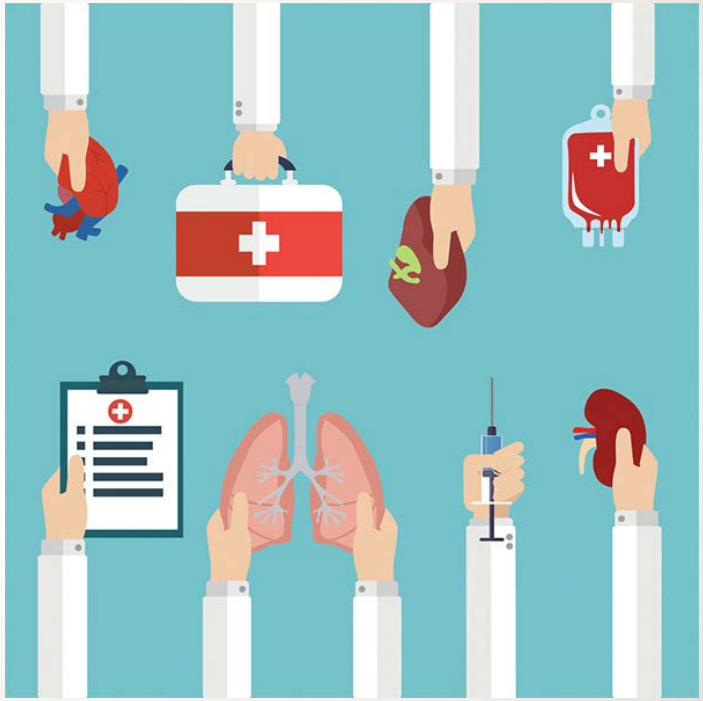
Transplant Risks

- What do you think are some of the risks for a patient with bipolar disorder being considered for transplant?

- How should we be proactive in our treatment plan for this patient population?

Bipolar Disorder and Transplant

- Risk for injury
- Medication non-compliance
- Disruptive to social supports
- Impair doctor-patient communication
- Early identification and treatment improves outcomes
- Chronic condition requiring ongoing pharmacological treatment to maintain stability



Human organs for transplantation (stefanamer, iStockphoto)

Assessment

https://www.rosehillcenter.org/wp-content/uploads/2020/01/recognizing-bipolar-disorder-in-loved-ones.jpg

- Behavior changes
  - Sleep, energy, mood, impaired judgement
- Hospitalization vs. psychiatry Referral
- Diagnostic psychiatric interview and thorough psychiatric and substance use history

Treatment

- Pharmacological treatment
  - Lithium considerations
  - Mood stabilizers and antipsychotics
  - Reduce steroids if medically possible
- Non-pharmacological treatment
  - Therapy
  - Self-management strategies
  - Complementary health approaches
  - Electroconvulsive therapy

Case Study - Mary

Mary is a 56 yo female with a history of bipolar disorder first diagnosed at age 17 who is currently being evaluated for a kidney transplant.

- What concerns do you have?
- What further information do you need?
- What should we include in our treatment plan for Mary?

Case Study - Mary

Mary's bipolar symptoms were stable on lithium for over 20 years. However, she developed focal segmental glomerulosclerosis s/t lithium and was switched to valproic acid prior to transplant.

- How should we manage her bipolar disorder perioperatively?
- If she destabilizes, what other medications might we consider?

Case Study - Mary

Mary receives a living donor kidney transplant with an uncomplicated perioperative and postoperative course. She presents to your office for her initial outpatient transplant visit and is on tacrolimus 10 mg qd. Her husband is concerned that she is displaying increasingly erratic behavior including emotional lability, agitation, grandiosity, decreased need for sleep, hypersexuality, irresponsible spending attempting to buy a $500,000 house and expensive clothes, increased appetite, and paranoia.

Case Study - Mary

Mary was sent to the ED and psychiatrically hospitalized for mania. On admission her labs were as follows:

- Tacrolimus 13.8 ng/ml
- Blood urea nitrogen 208 ng/ml
- Creatinine 1.258 ng/ml
- Glomerular filtration rate 60 mL/min
- Other labs wnl

Case Study - Mary

During the first week of admission patient was started on olanzapine and continued on valproic acid. Her manic symptoms persisted so the doses were increased. She developed sialorrhea on olanzapine so this was switched to quetiapine. Her symptoms stabilized on quetiapine 300 mg qhs and valproic acid 500 mg qam and 2,500 mg qpm with valproic acid level of 84 mcg/mL. At 3 months post-discharge her symptoms continued to be well-controlled.

Closing Thoughts

- "Psychiatric care is important to the unique perioperative treatment and chronic care of organ transplant recipients. Organ transplantation is a source of great hope, but the wait for a suitable donor organ can be challenging for both the doctor and patient, and postoperative complications are commonplace. In this setting, psychiatric care is a major support to ongoing surgical care rehabilitation, stress reduction, and medical compliance.”

  - from "Psychiatric Care of Patients Undergoing Organ Transplantation"

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Questions?