

# Anxiety and Depression in the Transplant Patient

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# Disclosures

- There are no conflicts of interests that need to be disclosed.

# Presentation Agenda

- Background
- Anxiety and Depression Considerations with Transplant
- Prevalence
- Diagnostic Criteria/Key Features
- Video
- Assessment and Screening Tools
- Treatment
  - Pharmacological Considerations
  - Non-Pharmacological Considerations
- Questions?

# Anxiety and Depression

- 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

# MDD in the Literature

- Transplant patients with MDD
  - Increased risk for decreased QOL, medication non-adherence, graft loss.
  - Higher risk of mortality post transplant
  - Other consequences include; less physically active, compromised immune function if less engaged in household cleaning/diet, and decreased engagement with the team.



# Prevalence

- Depression; 20-25% kidney transplant patients, 30% lung transplant patients, 30% heart transplant patients.
- Anxiety; 10-70%
- Insomnia

## Major Depressive Disorder

**1** out of 6 people in the US will succumb to clinical depression during their lifetime



**32** average age of MDD onset

Women are twice as likely to develop MDD

### Experiences with MDD

- Depressed mood
- Decreased energy
- Trouble concentrating
- Lost interest in activities
- Guilt or feelings of hopelessness
- Sleep disturbances
- Appetite changes
- Suicidal thoughts or attempts

[depression-symptoms.org](http://depression-symptoms.org)

# Overlap of Symptoms

- Symptoms of organ failure or symptoms of anxiety and depression?
  - Fatigue, poor sleep, low appetite, decreased attention to ADLs, irritability, etc.
- Let's look at the DSM criteria...

# Generalized Anxiety Disorder

## DSM-5 Criteria

- Characterized by **uncontrollable** and **excessive** worrying/anxiety
  - for more days than not
  - for **at least 6 months**
  - about several events and activities
  - causing significant distress/impairment in functioning
- Anxiety/worry is out of proportion to actual likelihood or impact of event/activity
- Worries are **more excessive, more distressing, have longer duration, and occur more spontaneously** than those experienced by non-pathological individuals
- Three of the six following symptoms must be present for diagnosis in adults; **Only one symptom must be present for children:**
  - Restlessness or feeling on edge
  - Easily fatigued
  - Difficulty concentrating or mind going blank
  - Irritability
  - Muscle Tension
  - Difficulty sleeping

(DSM-5, 2013)



# Major Depressive Disorder

**Table 1** DSM-5 criteria for MDE

- At least five of the following symptoms that cause clinically significant distress or impairment in social, occupational, or other important areas of functioning
- At least one of the symptoms is 1) depressed mood or 2) loss of interest or pleasure
- Symptoms must be present almost every day for at least 2 weeks
  1. Depressed mood most of the day
  2. Diminished interest or pleasure in all or most activities
  3. Significant unintentional weight loss or gain
  4. Insomnia or sleeping too much
  5. Agitation or psychomotor retardation noticed by others
  6. Fatigue or loss of energy
  7. Feelings of worthlessness or excessive guilt
  8. Diminished ability to think or concentrate, or indecisiveness
  9. Recurrent thoughts of death
- Diagnosis of recurrent MDD requires  $\geq 2$  MDEs separated by at least 2 months in which criteria are not met for an MDE

**Abbreviations:** DSM-5, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; MDD, major depressive disorder; MDE, major depressive episode.

# Differentials

- Depression or Anxiety due to a general medical condition
- Adjustment Disorder with anxious or depressed mood.
- Unspecified Anxiety or Depression.

# Patient Examples

- Joe is a 54yo male who is on the waiting list for liver transplant. He reports often feeling tired, bloated, and has lost weight from not being able to eat much. He is not able to enjoy his usual activities because of his decline and worries about when he will get a transplant. He has some guilt about his wife having to care for him but knows this is temporary and he would do the same for her. He still loves spending time with his granddaughter and is motivated for transplant so he can be around for her.



- Karen is a 62yo waiting for lung transplant. She is not able to sleep well because of her decline in breathing and cannot perform her typical household chores. She questions if things will ever get better and admits she feels hopeless at times. She has stopped going to pulmonary rehab, “what is the point?”. She has not been reading or watching cooking shows which she normal enjoys. Her family has noticed she is more withdrawn and no longer asks for help. She admits to feeling like a burden.





# How are they different?

- Some key differences;
  - Hopelessness, Anhedonia (loss of interest), suicidal thoughts
  - Excessive rumination
  - Loss of motivation
  - Impairment in Functioning
  - Participation in care, Adherence



# Video

- Modern Family's Sarah Hyland speaks out about her experience with kidney transplant
- <https://www.youtube.com/watch?v=EiR6DPzRufs>



# Assessments

- So how can we assess for anxiety and depression?
- Clinical Diagnostic Interview
- Free Screening Tools
  - GAD-7
  - PHQ-9



PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Over the last 2 weeks, how often have you been  
bothered by any of the following problems?  
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

add columns  +  +

(Healthcare professional: For interpretation of TOTAL, TOTAL:  
please refer to accompanying scoring card).

10. If you checked off <i>any</i> problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	_____
	Somewhat difficult	_____
	Very difficult	_____
	Extremely difficult	_____

VANDERBILT MEDICAL CENTER	PHQ-9 Score	GAD-7 Score	Severity	Proposed Treatment Actions
	0 - 4	0 - 5	None	None
	5 - 9	6 - 10	Mild	Watchful waiting, repeating at follow-up.
	10 - 14	11 - 15	Moderate	Consider CBT and pharmacotherapy.
	15 - 19		Moderately Severe	Immediate initiation of pharmacotherapy and CBT.
	20 - 27	16 - 21	Severe	Initiation of pharmacotherapy and CBT. Consider specialist referral to psychiatrist.



### GAD-7

Over the <u>last 2 weeks</u> , how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Total Score — = Add Columns — + — + —

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult  
at all  
☐

Somewhat  
difficult  
☐

Very  
difficult  
☐

Extremely  
difficult  
☐



# Other Considerations

- Effect of steroids/immunosuppressants
- Delirium (especially when inpatient)
- Pain control
- Vitamin Deficiencies
- Thyroid abnormalities
- Substance Use

# Treatment

- Research shows transplant patients with untreated depression have lower survival rates when compared to patients without depression and patients with effective antidepressant treatment.



# Pharmacological Treatments

- SSRI's are first line for GAD and MDD
  - Sertraline, escitalopram, citalopram may be preferable given less risk for interactions.
  - Fluoxetine CYP3A4 Inhibitor, higher potential for drug interactions.
- SNRI's second line
  - Duloxetine; May be helpful in those with chronic pain, more activating than SSRIs.

- Mirtazapine (5HT2 Receptor Agonist)
  - Augmenting agent or second line
  - Helpful for depression, insomnia, low appetite
  - Minimal drug interactions
- Bupropion (Dopamine Reuptake Inhibitor)
  - Alternative treatment for depression
  - Can help with low energy, concentration, motivation
- Hydroxyzine
  - Useful for PRN anxiety, safer than benzodiazepines
- Buspirone
  - Alternative treatment for anxiety

# Special Considerations

- SSRIs may increase risk of bleeding, can risk hyponatremia
- Generally, avoid Duloxetine in those with liver failure as it can be hepatotoxic
- SNRIs and Bupropion may increase BP
- Bupropion increase seizure risk, can exacerbate anxiety/irritability
- Sertraline can help with itching in patients with liver failure
- Monitor for QTC prolongation



# Looks Like Hypomania

- Agitation, irritability, insomnia, anxiety, lability, racing thoughts, paranoia, risky or odd behavior, hyperactive
- Most prevalent in the early post-transplant period due to high doses of steroids and IS meds; r/o other medical causes (delirium)
- Uncomfortable and puts patient at risk for non-adherence and other management problems

# Treatment of (Hypo)mania

- Decrease doses of steroids/IS if possible

## **Meds:**

- Oxcarbazepine
- Valproic acid
- Lamotrigine
- Quetiapine
- Olanzapine

**Avoid:** lithium, carbamazepine, Depakote

# Coping Skills Group

- <https://www.youtube.com/watch?v=UW9eP3w6TbM>



# Non-Pharmacological Interventions

- Individual Psychotherapy
- Group Therapy/Support Groups
- CBT, solution focused brief therapy, supportive therapy, dignity therapy, existential and meaning centered therapy.
- Mindfulness, meditation, progressive muscle relaxation, exercise
- Social Work



# COVID-19 Pandemic

- Lung Transplant Patients





# Conclusion

- Vulnerability of Transplant Patients
- Why identification/treatment is important
- Assessment
- Pharmacological and Non-Pharmacological Treatment

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# Questions?

