Summary: Major depressive disorder is a condition marked by low or irritable moods, along with physical symptoms such as problems with sleep, energy, and appetite. Treatment options include counseling/psychotherapy (e.g. interpersonal/attachment-based psychotherapy to address interpersonal stresses), lifestyle interventions (e.g. sleep hygiene, proper nutrition, regular exercise), as well as medication options (such as SSRIs).

Case, Part 1

T. is a 15-year old female brought who lives with both parents, and is seeing you just a few months after having started high school. Brought by her mother to the appointment, ostensibly due to new onset headaches and stomachs.

You ask about her mood, and she breaks down crying, saying that she has felt sad for the past few months. Symptoms include problems with sleep, appetite, energy and concentration since the school year started.

You meet alone with her, and when you ask about safety, she reports that she would never end her life “because it would hurt my family”. You schedule a follow-up for a week to further explore...

Epidemiology

Prevalence varies by age, reaching adult levels by adolescence

- Preschool: 0.3%
- Primary school: 1.8%
- Adolescents: 3-8% (i.e., more common than asthma and most other chronic medical problems in this age group) (Jackson, & Lurie, 2006), with 2:1 female: male ratio

Signs/Symptoms

Classic symptoms

- Depressed or irritable mood
- Neurovegetative symptoms
  - Sleep problems
  - Appetite problems
  - Concentration problems
  - Decreased interest or pleasure in activities, loss of pleasure (anhedonia), or decreased libido
Other red flags for depression include

- Adolescent who presents with unexplained physical (i.e. somatic) symptoms (such as headaches, fatigue, stomach aches, nausea) which do not have any obvious medical cause

### History / Interviewing Questions

#### Open-ended

- "How has your mood been?"
- "On a scale between 1 and 10, if 10 is the best mood possible, and 1 is the worst mood, how is your mood between 1 and 10?"
  - Non-depressed patients tend to report moods between 5-10
  - Patients with major depression may report moods <5, and as low as 1 if severely depressed

#### Closed-ended screening with SIGECAPSS

- S: Have you had periods of feeling **sad**, depressed or down? Or extremely irritable?
- I: Have you lost any **interest** or enjoyment in things you normally enjoy?
- G: Have you been feeling **guilty** or down on yourself?
- E: Problems with low **energy**?
- C: Any problems **concentrating** or paying attention? Making decisions?
- A: Any changes with your **appetite**? Lost or gained weight?
- P: Have you felt restless or (psychomotor) agitated? Have you been feeling slowed down?
- S: Any problems with your **sleep**?
- S: With everything that's been going on, have you had any thoughts that life isn't worth living (i.e. **suicidal** thoughts)? Ever thought about taking your own life? Ever done anything to end your life?

#### Stressors

- Everyone has stresses, such as school, home and relationships. What are your top stresses?

#### Resiliency factors, including reasons for living

- After asking about negative content such as suicidal ideation, balance it out with more positive or hopeful content such as resiliency factors or reasons for living
- Clinician: "I know that you may be feeling down, but I am glad that you are here. The fact that you are here proves to me that although a part of you is feeling down, there is a larger part of you that wants to live. What's kept you going? Who has kept you going?"

### DSM-5 Criteria for Major Depressive Disorder

A. At least five of the following symptoms for at least two weeks duration; at least one of the symptoms is either 1) depressed mood or 2) loss of interest or pleasure:

1. Depressed mood or loss of interest/pleasure
2. Anhedonia
3. Weight change; in children, consider failure to make expected weight gain
4. Sleep problems such as insomnia or hypersomnia
5. Psychomotor agitation or retardation
6. Fatigue or loss of energy
7. Feelings of worthlessness or excessive guilt
8. Concentration problems
9. Suicidal thoughts, whether passive or active

B. Symptoms cause distress or impairment in function
C. Episode is not due to substance use or a medical condition
D. Not better explained by other conditions such as schizoaffective disorder, schizophrenia, or other psychotic disorders.
E. There has never been a manic episode or hypomanic episode.
   • Specify:
     ○ With anxious distress
     ○ With mixed features
     ○ With melancholic features
     ○ With atypical features
     ○ With mood-congruent psychotic features
     ○ With mood-incongruent psychotic features
     ○ With catatonia
     ○ With peripartum onset
     ○ With seasonal pattern

More...

Differential Diagnosis (DDx)

| Normal moods | Adolescents may describe mood is “depressed”, yet this does not necessarily they have clinical depression
Adolescents can have labile moods, and their moods may be a result of various stressors
For this reason, monitoring the mood at a follow-up visit is important, along with other indices such as neurovegetative symptoms, and suicidal ideation |
| Other Mood Disorders | Patient has depressed mood, but without significant neurovegetative symptoms |
| • Adjustment Disorder with Depressed Mood | Depressive symptoms along with some neurovegetative symptoms, but without having enough symptoms to meet criteria for major depressive disorder
Note that despite being a “minor” depression, dysthymic disorder can be just as impairing as major depression |
| • Dysthymic disorder | Any signs of circadian rhythm disturbance such as decreased need for sleep with increased energy? |
| • Bipolar Disorder | Medical conditions |
| • CNS diseases | Brain tumors, multiple sclerosis |
| • Respiratory | Sleep apnea |
| • Endocrine | Thyroid problems (hypo and hyper), Pheochromocytoma |
| • Infectious | Meningitis, Infectious Mononucleosis |
| • Hematologic | Anemia: Are there risk factors such as vegetarianism, or menstruation?
Porphyria: Are there episodic symptoms? |
| • Neoplastic | Pancreatic Tumour: Are there other signs such as unexplained weight loss? |
| • Metabolic | Wilson’s Disease
Heavy Metal Toxicity (e.g. Lead, Mercury) |
| • Autoimmune | Lupus |
Comorbid Conditions

The most frequent comorbid diagnoses are:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Possible Screening Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety disorders</td>
<td></td>
</tr>
<tr>
<td>• Generalized anxiety disorder</td>
<td>Any problems with anxiety? What are your biggest worries?</td>
</tr>
<tr>
<td>• Social anxiety disorder</td>
<td>Are you an excessively shy?</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>Any problems with extreme swings in your mood? What are those swings like? Any times when you have lots of energy, along with an excited or irritable mood?</td>
</tr>
<tr>
<td>Disruptive behaviour disorders</td>
<td>Does your child tend to be defiant and oppositional?</td>
</tr>
<tr>
<td>Attention-deficit/hyperactivity disorder (ADHD)</td>
<td>Does your child have troubles paying attention at school/home? Any problems sitting still? Does your child need to fidget/home?</td>
</tr>
<tr>
<td>Substance use disorders (in adolescents)</td>
<td>How much alcohol do you drink? How often do you use substances, such as marijuana? If initial is positive, consider using the CRAFFT screening questionnaire to screen for alcohol or substance use problems C: Ever ridden in a Car driven by someone who was high or using drugs? R: Ever use alcohol/drugs to Relax, feel better or fit in? A: Ever use alcohol/drugs while you are Alone F: Ever Forget things you did while on drugs F: Do your Family/Friends ever say that you should cut down on your drinking or drug use? T: Ever gotten into Trouble while using alcohol/drugs?</td>
</tr>
</tbody>
</table>

Physical Exam (Px)

There are no specific physical exam findings to major depressive disorder.

Physical exam is important to rule out medical conditions that may mimic, or contribute to a mental health condition such as

- Thyroid or endocrine problems
- Infections such as meningitis, infectious mononucleosis
- Neurologic conditions such as tumors
- Tumors such as pancreatic cancer

Investigations

General screening tests

- CBC with differential
- Electrolytes, glucose, Ca
- Renal function (e.g. BUN/Cr)
- Thyroid screen, e.g. TSH
- Urinalysis with drug screen
- Liver enzymes
- Iron screen, e.g. serum transferrin
- B12 / folate

If suspected
- HIV antibody screen
- ESR
- Mg for Mg deficiency
- For Wilson’s disease: Serum copper and ceruloplasmin
- For porphyria: 24-hr urine porphyrin levels
- For heavy metal toxicity: Blood or urine levels for lead, mercury, or other suspected heavy metals
- For autoimmune: Autoantibody screen and Igs
- For infectious causes: Cultures for infectious agents
- For alcohol use problems: Blood alcohol level; GGT; triglycerides
- For phaeochromocytoma: Urine catecholamines
- Imaging
  - Head CT / MRI

Other
- Specific genetic testing (e.g. fragile X)
- Sleep studies
- EEG
- EKG

Management of mild to moderate depression

Psychotherapy /counseling
- For mild to moderate depression, psychotherapy/counseling
- [Where to Refer for Psychotherapy/Counseling...]

Lifestyle modifications
- Stop any medications that might be contributing to depressive symptoms
- Ensure adequate sleep
- Ensure adequate diet and nutrition
- Ensure adequate exercise
- Ensure adequate exposure to nature

Ensure social support
- Ensure that the patient has people (in particular parents) whom he/she can turn to
- For example, ensure parents can provide adequate emotional support such as through listening to their child, being able to validate how their child is feeling, and being able to provide empathy and acceptance (as opposed to being critical and judgmental of how their child is feeling)

Address any contributing comorbid conditions
- Attention deficit hyperactivity disorder (ADHD)
  - Ensure that there are appropriate school modifications/accommodations
  - If symptoms persist despite non-medication interventions, consider treatment with ADHD medications
- Alcohol / Substance use
  - If there is alcohol / substance use, ensure that there is appropriate counseling/therapy to address substance use
Management of moderate to severe depression

For moderate to severe depression, or for depression that has not yet responded, consider medications in addition to psychotherapy/counselling:

<table>
<thead>
<tr>
<th></th>
<th>First Line SSRI</th>
<th>Second-line SSRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoxetine (Prozac)</td>
<td>Child: Start 5 mg daily; target 10-20 mg daily</td>
<td>Escitalopram (Cipralex or generic)</td>
</tr>
<tr>
<td></td>
<td>Youth: Start 5-10 mg daily; target 10-60 mg daily</td>
<td>Youth: Start 5 mg daily; target 10 mg daily</td>
</tr>
<tr>
<td></td>
<td>Max 60-80 mg daily</td>
<td>Max 10-20 mg daily</td>
</tr>
<tr>
<td>Citalopram (Celexa or generic)</td>
<td>Child: Start 5-10 mg daily; target 10-40 mg daily</td>
<td>Citalopram (Celexa or generic)</td>
</tr>
<tr>
<td></td>
<td>Youth: Start 10 mg daily; target 10-40 mg daily for most</td>
<td>Youth: Start 5-10 mg daily; target 10 mg daily</td>
</tr>
<tr>
<td></td>
<td>Max 40-60 mg daily</td>
<td>Max 10-20 mg daily</td>
</tr>
<tr>
<td>Sertraline (Zoloft or generic)</td>
<td>Child: Start 25 mg daily; target 50-200 mg daily</td>
<td>Sertraline (Zoloft or generic)</td>
</tr>
<tr>
<td></td>
<td>Youth: Start 50 mg daily; increase by 50 mg/day every 2-weeks until satisfactory clinical response or maximal dosage</td>
<td>Youth: Start 50 mg daily; target 10 mg daily for most</td>
</tr>
<tr>
<td></td>
<td>Target 50-200 mg daily</td>
<td>Max 200 mg daily</td>
</tr>
<tr>
<td>Fluvoxamine (Luvox or generic)</td>
<td>Child: Start 25 mg daily; target 25-200 mg daily</td>
<td>Fluvoxamine (Luvox or generic)</td>
</tr>
<tr>
<td></td>
<td>Youth: Start 25-50 mg daily; target 50-300 mg daily</td>
<td>Youth: Start 25 mg daily; target 25-300 mg daily</td>
</tr>
<tr>
<td></td>
<td>Max 200-300 mg daily</td>
<td>Max 200-300 mg daily</td>
</tr>
<tr>
<td>Paroxetine (Paxil or generic)</td>
<td>Child: Start 5 mg daily; target 5-40 mg daily</td>
<td>Paroxetine (Paxil or generic)</td>
</tr>
<tr>
<td></td>
<td>Youth: Start 10 mg daily; target 60 mg daily</td>
<td>Youth: Start 5 mg daily; target 6-40 mg daily</td>
</tr>
<tr>
<td></td>
<td>Not usually used due to short half-life</td>
<td>Max 40-60 mg daily</td>
</tr>
<tr>
<td></td>
<td>Max 40-60 mg daily</td>
<td>Max 40-60 mg daily</td>
</tr>
</tbody>
</table>

Rationale for Medication Options

- For depression in children, some evidence exists for fluoxetine
- For depression in adolescents, there is good evidence for fluoxetine (TADS study); some evidence for escitalopram, citalopram and sertraline

Reference

- GLAD-PC, 2018

Switching from one medication to another? Consult this guide for switching medications


Case, Part 2

You ask about stresses and she reports:

- She was dating a boyfriend and “he was the first person who really understood me”, but unfortunately he broke up with her
- Since the breakup, “There will never be anyone else who will understand me again”
- She skips school often because he is in many of her classes, and it is just too difficult to have to continue seeing him every day

You ask about her relationships and supports and she reports:

- Mother/father: She does not feel that she can confide in her mother nor her father - “they never understand, they just want to lecture me”
- Friends: She does not feel she can confide in them since they have a tendency to share everything on social
You diagnose depression, and give the patient and mother basic information about depression.

Given that she has mild to moderate symptoms, along with significant psychosocial stressors, you refer her to a local mental health clinic for counseling, and see in 2-4 weeks to monitor her symptoms.

She starts seeing a counselor/therapist, with whom she reports a good therapeutic relationship. Parents learn how to provide emotional support by providing empathy, validation and unconditional acceptance, without lecturing her. She learns to confide in her parents, and their support helps her deal with her stressors.

Her symptoms improve, and at the last visit, she and her mother express their gratitude, “My daughter is so much better... Thank you for helping us realize that she had depression and getting us connected to help.”

References


About this Document

Written by members of the eMentalHealth.ca Primary Care Team, which includes Drs. Mireille St-Jean (Family Physician, Ottawa Hospital), Eric Wooltorton (Family Physician, Ottawa Hospital), Farhad Motamedi (Family Physician, Ottawa Hospital) and Dr. Michael Cheng (Psychiatrist, Children's Hospital of Eastern Ontario).

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Authors

Written by the eMentalHealth Team and Partners. Information partners include members of the Division of Child Psychiatry as well as members of the Department of Family Medicine at the University of Ottawa. Special thanks to medical student Christopher Clarkstone for his assistance with this article.