Comorbid Conditions and Antipsychotic Use in Patients with Depression

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Greensboro, NC
Faculty Disclosures

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Supporter Acknowledgement

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Educational Learning Objectives

• Upon completion of this activity, participants should be able to:
  ◦ Describe the association between cardiovascular disease risk factors and depression
  ◦ Characterize the metabolic risk associated with atypical antipsychotics
  ◦ Identify pharmacologic agents associated with a lower metabolic risk
  ◦ Summarize the most recent guidelines for metabolic monitoring
Audience Question

How often do you currently follow the consensus guidelines for baseline assessment and monitoring of patients receiving atypical antipsychotic medications?

A. Some of the time  
B. Most of the time  
C. Always  
D. Never, I trust the psychiatrist is handling that
Patient Case

• Robert is a 64yo male w/ a history of CAD, HTN, HLD, obesity, T2DM and depression presents for a follow-up visit after a hospitalization for chest pain
  ◦ He is without complaints; as he’s ready to leave, daughter says she’s worried about him
  ◦ He endorses symptoms of depression (loss of interest in things he used to enjoy, poor sleep, little appetite, hopelessness, poor concentration)
  ◦ Has been on a therapeutic dose of escitalopram for >3 months; historically, he has tried venlafaxine ER, bupropion and sertraline with either intolerance or poor response

• The local psychiatrists are booking out >3 months
DEPRESSION, DIABETES AND CARDIOVASCULAR DISEASE

THE WHY AND THE HOW
Diabetes & Depression – Epidemiology

Prevalence of Depression in Patients w/ Diabetes

CHD & Depression - Epidemiology

![Bar chart showing depressive symptoms and major depression in patients with recent MI and stable CHD.]

Percentile

Patients w/ Recent MI
- Depressive Symptoms: 31.1
- Major Depression: 19.8

Patients w/ Stable CHD
- Depressive Symptoms: 30
- Major Depression: 16.5
Prevalence of Depression in CHF

Patients with CHF

NYHA Class I  NYHA Class II  NYHA Class III  NYHA Class IV

Percentile

Diabetes & Depression - Consequences

All-cause Mortality Associated w/ Depression Among Individuals with Diabetes

1.5 (1.35-1.66)

## CHD & Depression - Consequences

<table>
<thead>
<tr>
<th>Meta-analysis</th>
<th>Number of studies</th>
<th>Number of participants</th>
<th>Outcomes</th>
<th>Odds ratio or relative risk (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicholson et al. (2006)</td>
<td>34</td>
<td>17,842</td>
<td>All-cause mortality</td>
<td>1.80 (1.50–2.15)</td>
<td>&lt;0.00001</td>
</tr>
<tr>
<td>Meijer et al. (2011)</td>
<td>29</td>
<td>16,889</td>
<td>All-cause mortality</td>
<td>2.25 (1.73–2.93)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cardiac mortality</td>
<td>2.71 (1.68–4.36)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CV events</td>
<td>1.59 (1.37–1.85)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Meijer et al. (2013)</td>
<td>3</td>
<td>10,175</td>
<td>All-cause mortality</td>
<td>1.33 (1.23–1.44)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CV events</td>
<td>1.19 (1.14–1.24)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Diabetes, CHD & Depression

Proposed Mechanisms

Bidirectional Relationship

Depression  

Diabetes & CHD
The Treatment Cascade of Major Depression

1. Diagnose depression
2. Start treatment of depression
3. Maximize treatment of depression
4. Achieve remission of depression
5. Maintain remission of depression
Diabetes & Depression – Identification

How Well are We Doing?

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Poor Psychological Well-Being</th>
<th>Received Psychological Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1DM</td>
<td>41</td>
<td>9</td>
</tr>
<tr>
<td>T2DM</td>
<td>41</td>
<td>12</td>
</tr>
</tbody>
</table>

DEPRESSION, DIABETES AND CARDIOVASCULAR DISEASE

TREATMENT: PHARMACOLOGY
# Antidepressants – SRIs

<table>
<thead>
<tr>
<th>Name</th>
<th>Starting dose (mg)</th>
<th>Starting dose in elderly (mg)</th>
<th>Therapeutic dosage range (mg)</th>
<th>Comments and common side effects (in addition to below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoxetine</td>
<td>20</td>
<td>10</td>
<td>20-60</td>
<td>Long half-life</td>
</tr>
<tr>
<td>Paroxetine</td>
<td>20</td>
<td>10</td>
<td>20-60</td>
<td>Antimuscarinic side effects</td>
</tr>
<tr>
<td>Sertraline</td>
<td>50</td>
<td>25</td>
<td>50-200</td>
<td>Few drug interactions at lower dose</td>
</tr>
<tr>
<td>Citalopram</td>
<td>20</td>
<td>10</td>
<td>10-40</td>
<td>QT prolongation concerns</td>
</tr>
<tr>
<td>Escitalopram</td>
<td>10</td>
<td>5</td>
<td>10-20</td>
<td>Few drug interactions</td>
</tr>
</tbody>
</table>
# Antidepressants – SNRIs

<table>
<thead>
<tr>
<th>Name</th>
<th>Starting dose (mg)</th>
<th>Starting dose in elderly (mg)</th>
<th>Therapeutic dosage range (mg)</th>
<th>Comments and common side effects (in addition to previous)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venlafaxine XR</td>
<td>75</td>
<td>37.5</td>
<td>75-225</td>
<td>Likely effective for diabetic neuropathy, HTN at higher doses</td>
</tr>
<tr>
<td>Duloxetine</td>
<td>30</td>
<td>30</td>
<td>60-120</td>
<td>FDA approved for diabetic neuropathy, Avoid with GFR &lt;30mL/min</td>
</tr>
</tbody>
</table>
## Antidepressants – Other

<table>
<thead>
<tr>
<th>Name</th>
<th>Starting dose (mg)</th>
<th>Starting dose in elderly (mg)</th>
<th>Therapeutic dosage range (mg)</th>
<th>Comments and common side effects (in addition to previous)</th>
</tr>
</thead>
</table>
| Bupropion SR   | 150               | 75                           | 150-400                       | Dose reduction in renal impairment  
|                |                   |                              |                               | Avoid in patient’s with seizures, eating disorders, DKA                        |
| Bupropion XR   | 150               | 150                          | 150-300                       |                                                                                |
| Mirtazapine    | 15                | 7.5                          | 30-45                         | Dose reduction in renal impairment                                               |

http://www.teamcarehealth.org/
### Antidepressant Medications

### CV Adverse Effects

<table>
<thead>
<tr>
<th>Medication</th>
<th>Mean diff (Kg)</th>
<th>95% CI (Kg)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paroxetine</td>
<td>2.73</td>
<td>(0.78 to 4.68)</td>
<td>0.006</td>
</tr>
<tr>
<td>Mirtazapine</td>
<td>2.59</td>
<td>(-0.23 to 5.41)</td>
<td>0.07</td>
</tr>
<tr>
<td>Amitriptyline</td>
<td>2.24</td>
<td>(1.82 to 2.66)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Citalopram</td>
<td>1.69</td>
<td>(-0.97 to 4.34)</td>
<td>NS</td>
</tr>
<tr>
<td>Nortriptyline</td>
<td>1.24</td>
<td>(-0.51 to 2.59)</td>
<td>NS</td>
</tr>
<tr>
<td>Duloxetine</td>
<td>0.71</td>
<td>(-0.23 to 1.65)</td>
<td>NS</td>
</tr>
<tr>
<td>Escitalopram</td>
<td>0.65</td>
<td>(-0.97 to 4.34)</td>
<td>NS</td>
</tr>
<tr>
<td>Sertraline</td>
<td>-0.12</td>
<td>(-1.25 to 1.42)</td>
<td>NS</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>-0.31</td>
<td>(-1.04 to 0.43)</td>
<td>NS</td>
</tr>
<tr>
<td>Bupropion</td>
<td>-1.87</td>
<td>(-2.37 to -1.37)</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>
STAR*D Trial

1. Citalopram

2. Switch: bupropion SR, sertraline, or venlafaxine ER
   • Augment: bupropion SR or buspirone
   - Remission Rates: 31%

3. Switch: mirtazapine or nortriptyline
   • Augment: lithium or T3
   - Remission Rates: 14%

4. Switch: tranylcypromine or mirtazapine + venlafaxine ER
   - Remission Rates: 13%

Overall Acute Remission Rates

## STAR*D Trial

### Overall Acute Remission Rates

<table>
<thead>
<tr>
<th>Phase</th>
<th>Treatment Options</th>
<th>Overall Acute Remission Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Citalopram</td>
<td>37%</td>
</tr>
</tbody>
</table>
| 2     | Switch: bupropion SR, sertraline, or venlafaxine ER  
      | Augment: bupropion SR or buspirone | 31%                           |
| 3     | Switch: mirtazapine  
      | Augment: lithium or T3         | 14%                           |
| 4     | Switch: tranylcypromine or mirtazapine + venlafaxine ER | 13%                           |

### Overall Intolerance Rates

<table>
<thead>
<tr>
<th>Phase</th>
<th>Overall Intolerance Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16%</td>
</tr>
<tr>
<td>2</td>
<td>19%</td>
</tr>
<tr>
<td>3</td>
<td>26%</td>
</tr>
<tr>
<td>4</td>
<td>39%</td>
</tr>
</tbody>
</table>

---

### FDA-Approved SGA for Augmentation of MDD or Treatment Resistant Depression (TRD)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Approved Use</th>
<th>Date of Approved Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aripiprazole</td>
<td>Augmentation for MDD</td>
<td>2007</td>
</tr>
<tr>
<td>Olanzapine/Fluoxetine</td>
<td>Treatment-resistant MDD</td>
<td>2009</td>
</tr>
<tr>
<td>Quetiapine/Quetiapine ER Quetiapine ER</td>
<td>Augmentation for MDD</td>
<td>2009</td>
</tr>
<tr>
<td>Brexpiprazole</td>
<td>Augmentation for MDD</td>
<td>2015</td>
</tr>
</tbody>
</table>

Derived from FDA Cariprazine information at http://www.accessdata.fda.gov
Aripiprazole: Augmentation

Remission Rate in ADT Minimal Responders

- Week 10: ADT+Placebo 5.6, ADT+Aripiprazole 17.3
- Week 12: ADT+Placebo 12.2, ADT+Aripiprazole 27.9
- Week 14: ADT+Placebo 21.0, ADT+Aripiprazole 34.2

Statistical significance: P<0.05

Remission Rates in ADT Non-Responders

- Week 10: ADT+Placebo 2.2, ADT+Aripiprazole 5.7
- Week 12: ADT+Placebo 3.7, ADT+Aripiprazole 12.8
- Week 14: ADT+Placebo 5.9, ADT+Aripiprazole 16.0

Statistical significance: P<0.05
## Aripiprazole: Augmentation

### Most Common Treatment-Emergent Adverse Events

(14-week study)

<table>
<thead>
<tr>
<th>Adverse event</th>
<th>ADT minimal improvers</th>
<th>ADT non-improvers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Placebo + ADT n = 219</td>
<td>Aripip + ADT n = 240</td>
</tr>
<tr>
<td>Akathisia</td>
<td>8 (3.7%)</td>
<td>46 (19.2%)</td>
</tr>
<tr>
<td>Insomnia</td>
<td>6 (2.7%)</td>
<td>21 (8.8%)</td>
</tr>
<tr>
<td>Somnolence</td>
<td>3 (1.4%)</td>
<td>13 (5.4%)</td>
</tr>
<tr>
<td>Dizziness</td>
<td></td>
<td>4 (2.9%)</td>
</tr>
<tr>
<td>Constipation</td>
<td>5 (2.3%)</td>
<td>14 (5.8%)</td>
</tr>
</tbody>
</table>

Olanzapine/Fluoxetine

• 6-month continuation-phase study of olanzapine/fluoxetine combination (OFC) v. fluoxetine (F) alone
  ◦ Benefit – continuation of remission
    – Continuation of OFC reduced risk of relapse by 50%
  ◦ Harm - treatment-emergent adverse events (TEAE)
    – Clinically significant weight gain (>7% weight gain)
      ◦ OFC → 11.8%
      ◦ F → 2.3%
    – For those patients who completed all 3 study phases (9 months of therapy)
      ◦ >7% weight gain in ORF arm → 53%
Quetiapine ER

Remission Rates at Week 6

- Placebo+ADT
- Quetiapine XR 150mg/d+ADT
- Quetiapine XR 300mg/d+ADT

MADRAS 10 or less

Percentile

0 5 10 15 20 25 30 35 40 45 50

32 41.8 46.3

P<0.05  P<0.001

## Quetiapine ER

### Most Common Treatment-Emergent Adverse Events
(two 6-week studies)

<table>
<thead>
<tr>
<th>Adverse event</th>
<th>Placebo + ADT n=309</th>
<th>Quetiapine XR 150mg/d + ADT n=315</th>
<th>Quetiapine XR 3000mg/d + ADT n=312</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somnolence</td>
<td>11 (3.6%)</td>
<td>71 (22.8%)</td>
<td>84 (26%)</td>
</tr>
<tr>
<td>Dizziness</td>
<td>20 (6.9%)</td>
<td>36 (11.4%)</td>
<td>36 (11.5%)</td>
</tr>
<tr>
<td>Constipation</td>
<td>11 (3.6%)</td>
<td>18 (5.7%)</td>
<td>33 (10.6%)</td>
</tr>
<tr>
<td>&gt;7% weight gain</td>
<td>5 (1.7%)</td>
<td>10 (3.2%)</td>
<td>22 (7.2%)</td>
</tr>
<tr>
<td>EPS</td>
<td>13 (4.2%)</td>
<td>12 (3.8%)</td>
<td>20 (6.4%)</td>
</tr>
</tbody>
</table>
Brexpiprazole Augmentation

**Table:**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Depression responders</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT+ Brexpiprazole 1 mg</td>
<td>1.69 (1.14-2.50)</td>
<td>0.0094</td>
</tr>
<tr>
<td>ADT+ Brexpiprazole 3 mg</td>
<td>1.65 (1.09-2.50)</td>
<td>0.0162</td>
</tr>
<tr>
<td>Placebo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graph:**

- **Title:** LS Mean (SE) Change From Baseline in MADRS Score
- **X-axis:** Week
- **Y-axis:** LS Mean (SE) Change From Baseline in MADRS Score
- **Legend:**
  - Placebo
  - Brexpiprazole 1 mg/d
  - Brexpiprazole 3 mg/d

# Brexipiprazole: TEAE

<table>
<thead>
<tr>
<th>Adverse Events</th>
<th>ADT + Placebo n=220</th>
<th>ADT+ Brexipiprazole 1mg n=226</th>
<th>ADT+ Brexipiprazole 3mg n=229</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discontinuation due to TEAE</td>
<td>3 (1.4%)</td>
<td>3 (1.3%)</td>
<td>8 (3.5%)</td>
</tr>
<tr>
<td>Akathisia</td>
<td>5 (2.3%)</td>
<td>10 (4.4%)</td>
<td>31 (13.5%)</td>
</tr>
<tr>
<td>Restlessness</td>
<td>0 (0%)</td>
<td>4 (1.8%)</td>
<td>10 (4.4%)</td>
</tr>
<tr>
<td>Somnolence</td>
<td>1 (0.5%)</td>
<td>9 (4.0%)</td>
<td>13 (5.7%)</td>
</tr>
<tr>
<td>Body weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Change from baseline</td>
<td>0.24kg 2 (0.9%)</td>
<td>1.40kg 11 (4.9%)</td>
<td>1.57kg 4 (1.8%)</td>
</tr>
<tr>
<td>• Increase &gt;7% from baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL, mean change, mg/dL</td>
<td>-1.41</td>
<td>-0.51</td>
<td>-0.92</td>
</tr>
<tr>
<td>HDL, mean change, mg/dL</td>
<td>0.34</td>
<td>1.13</td>
<td>2.07</td>
</tr>
<tr>
<td>Triglycerides, mean change, mg/dL</td>
<td>-1.31</td>
<td>3.31</td>
<td>2.20</td>
</tr>
</tbody>
</table>

Common Problematic Adverse Effects

- Aripiprazole
- Brexpiprazole ➔ Akathisia
- Quetiapine ER ➔ Sedation
- Olanzapine ➔ Increased appetite, Weight gain
FDA-Approved SGA for Augmentation of MDD

Cardiometabolic Profile – Weight Gain

Proportion of Patients with a ≥7% Increase in Body Weight
(6-week placebo controlled studies)

FDA-Approved SGA for Augmentation of MDD

Cardiometabolic Profile - Hyperglycemia

Proportion of Patients with Change from Baseline Normal (<100mg/dL) to High (>126mg/dL) (Up to 12-week placebo controlled studies)

- **Olanzapine/fluoxetine**: 0.3
- **Quetiapine ER**: 1.4
- **Aripiprazole**: 1
- **Brexpiprazole**: 0

**“Similar rates between medication and placebo”**

FDA-Approved SGA for Augmentation of MDD

Cardiometabolic Profile - Hyperglycemia

Proportion of Patients with Change from Baseline Borderline (>100mg/dL to <126mg/dL) to High (>126mg/dL) (Up to 12-week placebo controlled studies)

```
<table>
<thead>
<tr>
<th>Medication</th>
<th>Placebo</th>
<th>Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olanzapine/fluoxetine</td>
<td>3.6</td>
<td>34.1</td>
</tr>
<tr>
<td>Quetiapine ER</td>
<td>11.8</td>
<td>11.7</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>8.1</td>
<td>11.8</td>
</tr>
<tr>
<td>Brexipiprazole</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
```

“Similar rates between medication and placebo”

FDA-Approved SGA for Augmentation of MDD

Cardiometabolic Profile - Triglycerides

Proportion of Patients with Change from Baseline (<150mg/dL) to High (>200mg/dL)
(Up to 27-week controlled studies)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Percentile</th>
<th>Placebo</th>
<th>Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olanzapine/fluoxetine</td>
<td>5.4</td>
<td>16.2</td>
<td>8</td>
</tr>
<tr>
<td>Quetiapine ER</td>
<td>8</td>
<td>16</td>
<td>4.1</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>4.1</td>
<td>9.7</td>
<td>6</td>
</tr>
<tr>
<td>Brexipiprazole</td>
<td>6</td>
<td>7.4</td>
<td></td>
</tr>
</tbody>
</table>

Fluoxetine control, not placebo

FDA-Approved SGA for Augmentation of MDD

Cardiometabolic Profile – Total Cholesterol

Proportion of Patients with Change from Baseline (<200mg/dL) to High (>240mg/dL) (Up to 12-week placebo controlled studies)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Placebo</th>
<th>Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olanzapine/fluoxetine</td>
<td>3.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Quetiapine ER</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Aripiprazole</td>
<td>5.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Brexpiprazole</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

“Similar rates between medication and placebo”

Summary So Far...

- Depression
  - Lack of physical activity
  - Unhealthy diet
  - Smoking

- Medication w/ Adverse Metabolic Profile
  - Increased appetite
  - Weight gain
  - Possible direct metabolic effects

- Metabolic Dysregulation
  - Diabetes
  - Dyslipidemia
  - Hypertension
# Screening

**Consensus ADA + APA Guidelines**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>4 weeks</th>
<th>8 weeks</th>
<th>12 weeks</th>
<th>q3 months</th>
<th>q12 months</th>
<th>q5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal or family history</strong>*</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Weight (BMI)</strong></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Waist circumference</strong></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td><strong>Blood pressure</strong></td>
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<td><strong>Fasting glucose</strong></td>
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<tr>
<td><strong>Fasting lipid profile</strong></td>
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*Personal and/or family history of obesity, diabetes, dyslipidemia, hypertension, or cardiovascular disease*
Rates of Screening

**Lipid Testing**
- Preguideline Cohort
- Postguideline Cohort

**Glucose Testing**
- Preguideline Cohort
- Postguideline Cohort

Rates of Screening

GLUCOSE

Baseline, 30.2
Warning, 26.9
Post-warning, 31.1

Baseline, 26.1
Warning, 23.5
Post-warning, 27.9

SERUM LIPIDS

Baseline, 11.4
Warning, 11.2
Post-warning, 11.8

Baseline, 11.2
Warning, 9.1
Post-warning, 10.6

Recommendations

• Screen patients for cardiovascular risk factors
• Identify metabolic risk factors related to medications
  ◦ Young, drug-naïve, or non-Caucasian ethnicity
• Avoid using a medication with high metabolic liability whenever possible
• Monitor weight, blood pressure and get fasting blood glucose and lipid profile at baseline
  ◦ Especially important in the first year of treatment
• Offer healthy lifestyle counseling on regular basis
  ◦ Encourage to quit smoking, monitor alcohol use, diet, involve family

Going forward, how often do you plan to follow the consensus guidelines for baseline assessment and monitoring of patients receiving atypical antipsychotic medications?

A. Always
B. 100% of the time
C. > 99% of the time
D. All of the above
Patient Case

• Robert is a 64yo male w/ a history of CAD, HTN, HLD, obesity, T2DM and depression presents for a follow-up visit after a hospitalization for chest pain
• He is without complaints; daughter said she is worried he’s depressed
• His depression is significant, and his treatment needs to be adjusted
• The local psychiatrists are booking out >3 months
• Now what?
You consider switching antidepressants to improve this patient’s treatment response.

Of the antidepressants not yet tried by the patient, which of the following has been associated with the most weight gain?

A. Duloxetine
B. Mirtazapine
C. Fluoxetine
D. Nortriptyline
After discussing options with the patient, the decision is made to augment his current antidepressant with a second generation atypical antipsychotic.
Which agent has the most advantageous metabolic profile?

A. Olanzapine/fluoxetine
B. Clozapine
C. Brexpiprazole
D. Quetiapine
Patient Case

• Current visit
  ◦ You get a PHQ-9 score 21
  ◦ The SSRI is maintained at current dose
  ◦ Brexpiprazole 0.5mg qAM is initiated

• Follow-up appointment at 4 weeks
  ◦ Repeat PHQ-9 score 18
  ◦ No treatment-related adverse events noted
    – Weight is stable
  ◦ SSRI dose is maintained
  ◦ Brexpiprazole dose increased to 1mg qAM

• Follow-up phone call at 1 week
  ◦ He has been adherent with the medication
  ◦ No adverse events experienced

• Follow-up appointment at 8 weeks
  ◦ Repeat PHQ-9 score 10
  ◦ No adverse effects reported (weight remains unchanged)
  ◦ SSRI and brexpiprazole doses continued unchanged
Audience Question

Depression has been linked to which of the following adverse outcomes?

A. Increased all-cause mortality following MI
B. Increased CV mortality in patients with DM
C. Increased functional disability in patients with DM
D. All of the above
THANK YOU!

QUESTIONS AND/OR COMMENTS?