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Psychiatry and Addictions Case Conference

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BEST PRACTICES: ANTIPSYCHOTICS AND METABOLIC SIDE EFFECTS

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OBJECTIVES

1. Recognize the role of a primary care doctor in treating patients on antipsychotics
2. Improve prescribing practices by understanding which antipsychotics carry higher risks for metabolic side effects
3. Develop a stepwise approach to treating metabolic side effects in patients taking antipsychotics
4. Utilize appropriate screening and monitoring in patients taking antipsychotics

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CASE 1:

Mrs. S is 52-year-old female with HTN, pre-diabetes, and schizophrenia. She was started on Risperidone during a psychiatric hospitalization 3 months ago. Her psychotic symptoms are well controlled, however, she is concerned about side effects.

Current medications: Metformin 1000mg bid, Risperidone 1g BID, Lisinopril 10mg qd.

Today: BP 145/90, HR 66, weight 198lbs
A1C 7.4%

3 months ago: BP 130/65, HR 66, weight 180lbs
A1C 6.3%

Which of the following is most appropriate?

A. Continue Risperidone and recheck vitals and labs in 4 weeks
B. Switch Risperidone to Olanzapine
C. Start sulfonylurea
D. Educate and recommend change in diet and exercise
E. Discontinue her Risperidone and repeat vitals and labs in 1 month

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ANTI PSYCHOTICS IN PRIMARY CARE

Relevance:

- Patients with chronic mental illness have higher rates of obesity, DM, CV disease
- Patient's w/ serious mental illness die up to 10 years earlier than non-mentally ill patients from medical problems

PCP Roles may vary, and include:

- Diagnosing
- *Medication
  - Starting "best" agent
  - Adjusting and assessing response
- *Treating and monitoring med side effects
- Collaborating w/ other providers

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ANTIPSYCHOTICS IN PRIMARY CARE

Common issues in managing mental illness in primary care:

- Provider roles
- limited communication between medical and psychiatric systems
- Sharing vs. assuming ownership of. psychiatric care

- Key elements to good care:
  - Who's involved in providing care?
  - Consistent visits?

  - monitoring vitals, labs

  -educating patient on risks and benefits?

  -identifying relevant medical and family history to guide care

  These roles are often assumed and assumed assumed by primary care

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USING ANTIPSYCHOTICS

When would you start an antipsychotic?

- Schizophrenia
- Bipolar
- Severe depression
- Anxiety

  --Patients w/ psychotic symptoms need anti psychotics

Antipsychotic choice based on:

1. Evidence
2. **Co-morbidities**
3. **Side effects**
4. Compliance

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CASE 2

Mr. P is a 24 year old male with Dm2, HTN, HLD, and morbid obesity. He presents to your office endorsing 2 months of auditory hallucinations, decreased need for sleep, euphoric mood, racing thoughts, and rapid speech. He has a family history of bipolar disorder in his father and paternal grandfather. You are concerned that he is having a manic episode and diagnose him with bipolar disorder type 1.

Current medications: Metformin 1000mg bid, Lisinopril 10mg qd, Metoprolol 50mg bid.

Vitals: BP 140/80, HR 66, weight 245lbs, BMI 42.

Which of the following antipsychotics would be most appropriate to start in this patient, based on this information?

A. Aripiprazole
B. Risperidone
C. Olanzapine
D. Quetiapine

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CHOOSING AN ANTIPSYCHOTIC

- 2nd Generation preferred – efficacy and side effects

2nd Generation	1st Generation
”Atypical”	“Typical”
Commonly used:	Commonly used:
• Risperidone *Risperdal*	• Haloperidol / *Haldol*
• Lurasidone *Latuda*	• Thorazine
• Ziprasidone *Geodon*	
• Quetiapine *Seroquel*	*SIDE EFFECTS*
• Olanzapine *Zyprexa*	*-movement disorders*
• Aripiprazole *Abilify*	*-can be irrevesible*

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SECOND GENERATION ANTI PSYCHOTIC SIDE EFFECTS

-All second generation antipsychotics (SGA) associated w/ some metabolic side effects

-Impacts monitoring, choice of agent

Metabolic syndrome:

- Central obesity*
- Elevated TG
- Low HDL
- Elevated BP
- Impaired fasting glucose

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SGA METABOLIC SIDE EFFECTS

1-3 months after starting SGA:

– >5% weight gain

– Abnormal BPs, TG, BS

→Attributable to SGA

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SGAS

- Risperidone *Risperdal*
- Lurasidone *Latuda*
- Ziprasidone *Geodon*
- Quetiapine *Seroquel*
- Olanzapine *Zyprexa*
- Aripiprazole *Abilify*

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Frequency and Severity of Antipsychotic Side effects:

	Antipsychotic medication									
Side effect	**Haloperidol**	**Amisulpride**	**Aripiprazole**	**Clozapine**	**Olanzapine**	**Paliperidone**	**Quetiapine**	**Risperidone**	**Sertindole**	**Ziprasidone**
Akathisia/Parkinsonism	+++	0/+	+	0	0/(+)	0/++	0/(+)	0/++	0/(+)	0/(+)
Tardive dyskinesia	+++	(+)	(+)	0	(+)	(+)	?	(+)	(+)	?
Seizures	+	0	(+)	++	0	0	0	0	(+)	0
QT prolongation	+	(+)	(+)	(+)	(+)	(+)	(+)	(+)	+++	++
Glucose abnormalities	(+)	(+)	0	+++	+++	++	++	++	+	0
Lipid abnormalities	(+)	(+)	0	+++	+++	++	++	++	+	0
Constipation	+	++	0	+++	++	++	+	++	+	0
Hypotension	++	0	+	(+)	(+)	++	++	++	(+)	0
Agranulocytosis	0/(+)	0/(+)	0/(+)	+	0/(+)	0/(+)	0/(+)	0/(+)	0/(+)	0/(+)
Weight Gain	+	+	(+)	+++	+++	++	++	++	++	(+)
Prolactin elevation	+++	+++	0	0	(+)	++	(+)	++	(+)	0
Galaktorrhoea	++	++	0	0	+	++	0	++	(+)	0
Dysmenorrhoea	++	++	0	0	+	++	(+)	++	(+)	(+)
Sedation	+	0/(+)	0	+++	+/++	+	++	+	(+)	0/(+)
MNS	+	?	(+)	(+)	(+)	(+)	(+)	(+)	(+)	?

Frequencies and severity of side effects refers to information obtained by drug companies, FDA, additional literature and other guidelines.

World Federation of Societies of Biological Psychiatry (WFSBP) Guidelines for Biological Treatment of Schizophrenia, Part 2: Update 2012 on the long-term treatment of schizophrenia and management of antipsychotic-induced side effects

CHOOSING BEST SGA BASED ON METABOLIC SIDE EFFECTS

Side effect	Abilify	Olanzapine	Quetiapine	Risperidone	Ziprasidone	Lurasidone
Blood sugar	0	+++	++	++	0	0
Lipids	0	+++	++	++	0	0/(+)
Weight gain	(+)	+++	++	++	(+)	0

+++ high frequency and/or severity of side effect
(+) may not be different from placebo
0 side effect not associated

Adapted from World Federation of Societies of Biological Psychiatry (WFSBP) Guidelines for Biological Treatment of Schizophrenia, Part 2: Update 2012 on the long-term treatment of schizophrenia and management of antipsychotic-induced side effects

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CASE 2 REVISITED

Mr. P is a 24 year old male with **DM2**, **HTN, HLD, and morbid obesity**. He presents to your office endorsing 2 months of auditory hallucinations, decreased need for sleep, euphoric mood, racing thoughts, and rapid speech. He has a family history of bipolar disorder in his father and paternal grandfather. You are concerned that he is having a manic episode and diagnose him with bipolar disorder type 1.

Current medications: Metformin 1000mg bid, Lisinopril 10mg qd, Metoprolol 50mg bid.

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Which of the following antipsychotics would be most appropriate to treat this patient, based on this information?

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B. Risperidone
C. Olanzapine
D. Quetiapine

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TAKE AWAY:

- Choose agent based on evidence, co-morbidities and medication side effects
- SGAs preferred over FGAs
- Baseline metabolic disorder?
  - Initial agent: Aripiprazole, Lurasidone, Ziprasidone

TREATING SIDE EFFECTS

Case 3

Ms. C is a 40-year-old female with bipolar type II, HLD currently on Olanzapine 10mg qhs. She feels her medications are effective and has not been hospitalized since starting this regimen, but is concerned about medication side effects. She admits to minimal physical activity and mostly eating fast food.

Today: BP 116/80, pulse 76, weight 207 pounds

1 year ago: Weight 190lbs (prior to starting Olanzapine)

Which of the following interventions would be the most appropriate for this patient?

a. Stop the Olanzapine and start Ziprasidone
b. Recommend weight loss
c. Start Metformin 500mg BID
d. All of the above

D. All of the above

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TREATING METABOLIC SIDE EFFECTS SECONDARY TO SGAS

Initial options:

1. Lower SGA dose
2. Change medications
   - SGA w/ lower metabolic risk
   - 1st generation

Practical considerations:

- likelihood of changing habits – diet and exercise
- Risk benefit
- Will side effects increase chance of discontinuation
  - metabolic side effects – one of the most common reasons for discontinuation
  - -high rates of discontinuation with all antipsychotics

Dynamed. Medications for Schizophrenia.
The CATIE schizophrenia trial: results, impact, controversy. Theo C Manschreck;Roger A Boshes
ISSN: 1067-3229 , 1465-7309; DOI: 10.1080/10673220701679838 Harvard review of psychiatry. , 2007, Vol.15(5), p.245-258

METABOLIC SIDE EFFECTS

1st line treatment: diet and exercise

- Significant calorie reduction (500-1000 cal /day)
- 150 minutes aerobic exercise per week
- Weigh ins, food logs
- Motivational interviewing to assess readiness, create goals
  - Not ready: educate on risks/benefits of change
  - Ready: create action plan and goals
  - Identify positive impact of change

OBESITY

-includes central adiposity, > 5% weight gain

- Consider medication:
  - BMI>30
  - BMI>27 + obesity co-morbidity
- 1st line: Metformin
- Other evidence based options for weight loss:
  - SGLT-2 inhibitor
  - Orlistat

Special considerations:

- Avoid Phentermine/Topamax
- Wellbutrin/Naltrexone – avoid in bipolar pts

Johns Hopkins.

ELEVATED BLOOD SUGARS

-impaired fasting glucose, DM

1st line medication: Metformin

- Start routine screening and protective treatment strategies for diabetic patients

-If BS are still uncontrolled:

- Add 2nd agent based on:
  - Adherence
  - Cost
  - Injectable (GLP1 or insulin)
  - PO intake
  - weight

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HYPERTENSION AND HYPERLIPIDEMIA

- Same treatment goals and medications as in non-mentally ill
- Consider role of substances, anxiety in BP measurments
- HTN treatment: race, co-morbidities, diuretic
- Higher rates of CV disease in severely mentally ill, so monitoring and treatment is important

MONITORING ANTI PSYCHOTIC SIDE EFFECTS: CASE 4

You are seeing a patient 12 weeks after starting him on Risperidone. He reports good control of his auditory hallucinations.

Which of the following should be checked at today's visit in order to appropriately monitor for side effects on a Second Generation Antipsychotic?

A. BMI, blood pressure, lipid panel and fasting glucose
B. Waist circumference, blood pressure and lipid panel
C. BMI, blood pressure, TSH and lipid panel
D. BMI, blood pressure and lipid panel

Answer: **A. BMI, blood pressure, lipid panel and fasting glucose**

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MONITORING SGA SIDE EFFECTS

	Baseline	1 month	3 months	12 months	Annually
BP	x	x	x	x	x
Weight/ waist circumference	x	x	x	x	x
Blood sugar	x		x	x	x
lipids	x		x	x	x
**EKG	x			x	x

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SUMMARY

- Consider your role in patients taking antipsychotics – prescribing, managing side effects
- PCPs are often better equipped to monitor metabolic side effects associated w/ SGAs
- Choosing the best agent requires consideration of co-morbidities, med side effects
- SGAs preferred over FGAs
- Higher degree of metabolic side effects associated with Olanzapine, Quietipine and Risperidone
- Minimal metabolic side effects associated with Abilify, Geodon and latuda
- Consider practical limitations in managing SGA associated co-morbidities, and manage as you would w/ non mentally ill
- 1st line agents for BS and weight gain: diet + exercise, Metformin
- Safe prescribing requires baseline assessment of metabolic parameters, then follow up at 1, 3 and 12 months for monitoring

QUESTIONS?

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