

# **Aripiprazole-induced Extrapyramidal Symptoms: A Case Report**

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# Facts About Aripiprazole (Abilify®)

- FDA approved for treatment of schizophrenia on November 15, 2002
- Second generation atypical antipsychotic
- Unique mechanism of action:  $D_2-5HT_{2A}$  stabilizer
  - Partial agonist at  $D_2$  and  $5HT_{1A}$  receptors
  - Antagonist at  $5HT_{2A}$  receptors
  - Antagonist at postsynaptic  $D_2$  receptors
- Few extrapyramidal symptoms (EPS)
  - Akathisia: aripiprazole vs placebo → 0.08 - 0.05

# Case Report: Patient Characteristics

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- 57-year-old, Russian female, ABW= 72.2 kg
- Normal renal/hepatic function
- CC: Schizophrenia exacerbation
- PMHx: Chronic Schizoaffective Disorder, Type 2  
Diabetes Mellitus

# Case Report: Medications Upon Admission

- Metformin (Glucophage<sup>®</sup>) 850 mg po bid
- Glipizide (Glucotrol<sup>®</sup>) 5 mg po qd
- Insulin coverage scale
- Aspirin EC (Ecotrin<sup>®</sup>) 81 mg po qd
- Chlorpromazine (Thorazine<sup>®</sup>) 300 mg po bid
- Vitamin A & D ointment
- Betamethasone cream

# Case Report: Hospital Course *Prior to Aripiprazole Therapy*

Inpatient Hospital Day	Event
Day 8	QTc prolongation on electrocardiogram (ECG); ↓ chlorpromazine from 300 mg po bid → 200 mg po bid → 100 mg po qd
Day 21	D/C chlorpromazine; START aripiprazole 10 mg po qhs (Day 1 of aripiprazole therapy)

# **Case Report: Hospital Course *During Aripiprazole Therapy***

<b>Day on aripiprazole therapy</b>	<b>Event</b>
<b>Day 4</b>	<b>Uncontrollable bilateral tremors of arms, head and having an unsteady gait</b>
<b>Day 6</b>	<b>↑ Aripiprazole from 10 mg →15 mg po qhs</b>
<b>Day 10</b>	<b>6 days of EPS; Start benztropine 0.5 mg po bid</b>

# **Case Report: Hospital Course *During* Aripiprazole Therapy**

<b>Day on aripiprazole therapy</b>	<b>Event</b>
<b>Day 12</b>	<b>D/C aripiprazole 15 mg po qhs Start metoprolol 12.5 mg po bid Continue benztropine 0.5 mg po bid</b>

# Case Report: Hospital Course After Stopping Aripiprazole therapy

Day	Event
Day 12	D/C aripiprazole therapy Lab work-up for NMS = $\uparrow$ WBC = $14.7 \times 10^3/\text{mm}^3$ Repeat work-up = WBC = $10.2 \times 10^3/\text{mm}^3$
Day 7	EPS continued to be present $\uparrow$ Metoprolol 12.5 mg to 25 mg po bid $\uparrow$ Benztropine 0.5 mg to 1 mg po bid
Day 10	EPS resolved

# Incidence of EPS with Aripiprazole

- Atypical-induced EPS may be due to dose-dependent affinity for 5HT<sub>2A</sub> receptor
- Aripiprazole's unique mechanism of action may lead to decreased incidence of EPS
- Mechanism of aripiprazole-induced EPS remains to be elucidated
- Clinicians must be cognizant that EPS may be an adverse effect associated with aripiprazole