High Dose Haloperidol Decanoate Augmentation with Paliperidone Palmitate: A Case Report

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Objectives

• Describe the case of a patient who responded well to two long-acting injectable antipsychotics concomitantly

• Discuss the pharmacotherapy challenges in a patient who refuses oral medications

• Recognize the potential for using multiple long-acting injectable antipsychotics

Question 1

What is the recommended maximum amount of haloperidol decanoate (in mg) that can be given in a single injection?
A. 100 mg
B. 250 mg
C. 300 mg
D. 450 mg

Question 2

What is the median time to maximum concentration following a single injection of paliperidone palmitate?
A. 7 days
B. 13 days
C. 25 days
D. 47 days

Patient Case

Chief Complaint:
– “My mom sent me here”

History of Present Illness:
– AB is a 44 year old African American male admitted for treatment of psychosis
– Mother committed him for increasing erratic/disorganized behavior
– Diagnosis of schizophrenia, paranoid type with multiple past admissions

Past Medical History:
– Obesity, hypertension, hyperlipidemia

Family History:
– Unknown

Social History:
– Previously married with children
– Worked as a truck driver, currently unemployed
– Smoke 1 PPD
### Patient Case

**Vitals:**
- WNL except BP of 145/85 mmHg

**Laboratory:**
- CMP and CBC WNL and noncontributory

### Mental Status Exam:
- Unkempt, malodorous AA male appearing stated age
- Eye contact was poor
- Mood was “fine”
- Affect was irritable
- Speech was soft and somewhat disorganized
- Orientation was intact
- Insight and judgment were poor
- No SI/HI

### Medications on Admission:
- Haloperidol decanoate 400 mg IM every 2 weeks
  - Fair compliance
- Amlodipine 10 mg and atorvastatin 40 mg daily
  - Poor to no compliance

### Days 1-14
- Restarted on home medication regimen with addition of haloperidol 20 mg PO daily
- Noted to be internally preoccupied and isolative
- Refusing all PO medications, but requested addition of 10 mg IM haloperidol daily

### Days 15-28
- Some improvement in disorganization, but continued to refuse PO medications
- Stated he would not continue PO medications under any circumstance following discharge
- Post injection (PI) levels:
  - PI Day 3 = 26.8 ng/mL
  - PI Day 9 = 22.8 ng/mL
  - PI Day 14 = 18 ng/mL

### Days 15-28, cont.
- In order to determine appropriate steps following discharge, a case conference was held
- Patient preference was to increase haloperidol decanoate dose or frequency
- Decision was made to add a second long-acting injectable antipsychotic
  - Paliperidone palmitate
The Discussion

• What options should we consider?
  – Clozapine – patient adamantly refused
  – Increase haloperidol decanoate dose/frequency
    • Dose or frequency would increase injection burden and could lead to injection site changes
  – Other long-acting injectable antipsychotics
    • Risperidone or fluphenazine would require every 2 week injections
    • Olanzapine has more injection risks and metabolic risks
    • Paliperidone – every 4 week injection

Review of the Literature

• PubMed search revealed no reported cases of administering haloperidol decanoate and paliperidone palmitate concurrently

Haloperidol Decanoate

• Available as 50 mg/mL and 100 mg/mL
• Maximum injection volume = 3 mL
  – Max of 300 mg
• Dosing varies, but rarely exceeds 450 mg
• Dosing interval varies, but usually monthly
• Proposed therapeutic range = 5 to 12 ng/mL

Paliperidone Palmitate

• Once monthly injection
• Median $T_{\text{max}}$ = 13 days following single injection
• Administer in deltoid or gluteal muscle

The Decision

• Patient with:
  – Residual symptoms
  – Longstanding, adamant refusal to accept PO medications
  – Already receiving 4 injections per month
  – Obesity and hyperlipidemia
• Treatment team determined paliperidone palmitate would be the best option

Patient Case: Days 29-56

• Following a week trial of risperidone orally, paliperidone palmitate 156 mg IM every 4 weeks was ordered and administered
• No anticholinergic medications required
• No signs/symptoms of extrapyramidal side effects
• Follow up haloperidol trough (without PO supplementation) = 12 ng/mL
Patient Case: Days 57-68

- Patient disorganization and internal preoccupation slowly improved
- On day 68, patient was transferred to a step down unit

Patient Case: Days 69-153

- Due to patient tolerance and minor residual symptoms, patient dose of paliperidone palmitate was increased to 234 mg every 4 weeks
- Affect was brighter and patient was more reactive throughout rest of stay
- Patient was reintegrated into the community with outings and meetings with family
- On day 153 patient was discharged from hospital to LTSR

Conclusions

- This case report describes the successful use of paliperidone palmitate in addition to high dose haloperidol decanoate
- Situations warranting two long-acting injectable antipsychotics are rare
- Clinicians should be aware of this therapeutic option

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QUESTIONS?

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