

Introduction

The extrapyramidal motor system depends on excitatory cholinergic neurotransmitters and inhibitory dopaminergic neurotransmitters. The latter may be blocked by phenothiazine and butyrophenone medications.

Epidemiology

- 0.5-1% of patients given metoclopramide or prochlorperazine.
- Up to 33% will have a dyskinesia within 7 days of initial typical antipsychotic Rx.
- M>F
- Risk decreases with age

Presentation

Most have a history of recently taking antipsychotic medication or antiemetic. Occasionally H₂ antagonists, erythromycin, antihistamines, SSRI, and antimalarials. Cocaine & EtOH ↑risk. On examination will usually be distressed & have peculiar posturing or difficulty speaking.

Acute dystonias usually present with one or more of the following symptoms:

- Oculogyric crisis: Extraorbital muscle spasm - gaze up and outwards. Blepharospasm.
- Torticollis: Head held turned to one side.
- Opisthotonus: Painful forced extension of the neck. Back-arching off bed if.
- Macroglossia: The tongue does not swell, but it protrudes and feels swollen
- Buccolingual crisis: May have trismus, risus sardonicus, dysarthria and grimacing
- Laryngospasm: Uncommon but frightening
- Tortipelvic crisis - Typically involves hip, pelvis, and abdominal wall muscles,
- Spasticity: Trunk muscles and less commonly limbs can be affected

Differential Diagnosis

- Partial seizures
- Psychotic posturing
- Tetanus
- Strychnine poisoning
- Hyperventilation/Electrolyte imbalances (hypomagnesemia, hypocalcemia, alkalosis)
- Neuromuscular disease - e.g. Wilson's

Management

More chronic neurologic side effects of phenothiazines, including the restlessness of akathisia, tardive dyskinesias, and Parkinsonism, do not usually respond as dramatically to drug treatment as the acute dystonias.

Medication options:

- **benztropine** (Cogentin) 1-2mg (child 0.02mg/kg) IM/IV
- **promethazine** (Phenergan) 25-50mg (child 0.5mg/kg) IM/IV

Watch for effect in ~5-15mins. Can repeat dose. If not improved consider DDX.

If refractory but sure of diagnosis can use diazepam as muscle relaxant.

Discontinue the offending drug & arrange for follow up if medications must be adjusted.

Continue PO benztropine bd or promethazine tds for 48-72 hours.

Complications

- Rarely upper airway obstruction from pharyngeal muscle spasm or laryngospasm.