Can Compazine Kill? Suicidal Intent after Prochlorperazine Use in a Patient with Cholangitis

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Background

Prochlorperazine

- **Mechanism of action:** Dopamine receptor antagonist; also blocks histaminergic, cholinergic, and noradrenergic receptors
- **Indications:** First-generation antipsychotic [1], migraines (off-label) [2-3], antiemetic [4]
- **Similar efficacy as an anticholinergic with metoclopramide, ondansetron, promethazine [4]
- **Adverse effects:** Extrapyramidal symptoms (EPS) akathisia, Parkinsonism, and tardive dyskinesia; lower seizure threshold; anticholinergic side effects – anoxia, constipation, blurred vision, dry mucosa, urinary retention; lower seizure threshold; prolonged QTc; orlistatic hypotension; effects from dopamine blockade in tuberoinfundibular tract (e.g. hyperprolactinemia); leukopenia; agranulocytosis; cholestatic jaundice, fatty liver [1]
- **EPS can manifest as anxiety, depression, and catatonia.** [5]
- No reports have shown that this symptom has presented as suicide-like behavior
- **Contraindicated conditions:** epilepsy, hypothyroidism, liver dysfunction, renal dysfunction, pheochromocytoma
- **Contraindicated medications:** antidepressants, antihypertensives, anticonvulsants
- **No studies have looked at specific adverse effects in patients with liver or biliary disease
- **To our knowledge, this is the first case of prochlorperazine causing severe akathisia leading to suicidal intent

Case Presentation

- 38 y/o F presented to the ED with right upper quadrant abdominal pain, nausea, and fever
- Past Medical History: Pancreatic divisum status post Whipple in 2014, recurrent cholangitis from biliary anastomotic stricture, secondary sclerosing cholangitis secondary to R hepatic artery embolization
- Past Psychiatric History: Depression (began in late adolescence), well-controlled on mirtazapine
- Labs: elevated LFTs – ALT 578, AST 413, Alk Phos 587
- Admitted to floors, scheduled for ERCP day next to evaluate cholangitis.
- Morning after admission: she was given 10 mg IV prochlorperazine for nausea after requesting to not have ondansetron
- Within an hour of administration, she felt “internal restlessness, irritability, needing to move, and anxiety.”
- This led to her standing on a chair, sticking her hand in the sharp container, and stating that she was trying to find something sharp to kill herself.
- Medication was discontinued. Suicide precautions, including 1:1 observation, were started. Psychiatry was consulted.
- When asked about her intentions, she responded, “I guess stab myself.”
- During consultation, she denied current suicidal ideation and did not have suicidal ideation before receiving prochlorperazine. She stated that this was “out of character and felt embarrassed.”
- 1:1 was discontinued. She was started on ondansetron PRN for nausea, which was well-tolerated.
- She underwent ERCP with stent placement and was discharged a few days later without any further complications.

Discussion

- **First case in the literature of a patient that had akathisia leading to impulsive suicide intent from prochlorperazine usage
- Akathisia occurs in 44% of patients that used prochlorperazine an anti-emetic [6]
- Onset of drug-induced akathisia can be within an hour [7]
- Similar case was seen in a patient who was given prochlorperazine for nausea six days after a left hepatic lobectomy
- This patient felt anxious and was shifting restlessly, and she felt like jumping out of the window. [5]
- Also denied suicidal ideation and stated that mood was not depressed. [5]
- Also improved quickly with discontinuation.

Conclusion

- Given the commonality of akathisia, potentially quick onset, and severity of akathisia as seen by our patient, close monitoring of patients who are given prochlorperazine should be considered
- Management should be quick discontinuation of medication with minimal intervention needed.

References


Image 1: Timeline of events