Canadian Association of Gastroenterology | L'Association Canadienne de Gastroentérologie
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IV Pantoprazole Shortage

For the current status of drug shortages and discontinuations, refer to Drug Shortages Canada at www.drugshortagescanada.ca.

These recommendations are intended as guidance for health care professionals to select alternatives and mitigation strategies during the acute drug shortage of IV pantoprazole. The severity of the current shortage varies by facility and thus, each hospital will need to assess the degree to which conservation strategies are necessary to preserve IV pantoprazole for patients with the most urgent situations.

TABLE 1: Pantoprazole products marketed in Canada[1]

Product	Format	DIN	Manufacturer
Pantoprazole Sodium Injection	40mg vial	02306727	Sandoz Canada Inc
Pantoprazole Sodium Injection	40mg vial	02458969	Auro Pharma Inc
Pantoprazole Sodium Injection	40mg vial	02515857	Jamp Pharma Inc
Pantoprazole Sodium Injection	40mg vial	02352214	Fresenius Kabi Canada Ltd
Pantoprazole Sodium Injection	40mg vial	02441527	Generic Medical Partners Inc*

**Currently working to relaunch the product in Canada*

Health Canada approved indications for pantoprazole injection[2]:

For the short-term treatment (up to 7 days) of conditions where a rapid reduction of gastric acid secretion is required, such as the following:

- Reflux esophagitis, in hospitalized patients who cannot tolerate oral medication
- Pathological hypersecretion associated with Zollinger-Ellison Syndrome, in hospitalized patients who cannot tolerate oral medication.

Management strategies

General Conservation Strategies:

Pantoprazole is the only parenteral treatment available in Canada for reducing gastric acid secretion.[1] Hospitals and health care centres are encouraged to adopt conservation strategies which may include:

1. Intravenous to oral therapeutic substitution
   - If proton pump inhibitor (PPI) therapy is indicated, oral therapy should be used (see Table 2) for all patients who are already on oral/enteral feeds, clear fluids, or already taking other oral medications
2. Restrict supply of intravenous pantoprazole
   - Limit supply of IV pantoprazole for patients with active peptic ulcer bleeding but cannot have oral medications due to bowel obstruction, intestinal failure, persistent vomiting, or dysphagia
3. Limit pre-endoscopy use intravenous pantoprazole

- If PPI is used before endoscopy in patients with suspected peptic ulcer bleeding, use standard dose oral regimen (pantoprazole 40mg OD or BID or equivalent). Medications can be taken with sips of water while NPO waiting for endoscopy[3]

4. Consider intermittent IV doses in place of continuous infusion
    - Pantoprazole 40mg IV q8-12h can be offered with similar efficacy and effectiveness of pantoprazole continuous infusion treatment for acute upper GI bleeding.[4]

Critical shortage Conservation Strategies

In the context of a critical shortage of IV pantoprazole, where it is anticipated that the supply will deplete prior to the return dates, consider intermittent PPI oral regimens in lieu of the standard continuous infusion or intermittent IV regimen:

1. Use high dose oral regimen (pantoprazole 80mg po bolus followed by 40mg po q6h for 72 hours) in patients with peptic ulcer bleeding post endoscopic intervention for high-risk stigmata*.[5,6]
2. Use standard dose oral regimen (pantoprazole 40mg OD or BID) in patients with peptic ulcer bleeding with low-risk stigmata**. [5,6]
3. Use histamine-2-receptor antagonists (H2RAs) instead of IV PPI for stress ulcer prophylaxis during invasive mechanical ventilation.
    - While evidence suggests that single daily dose of IV PPI is more effective than H2RAs in improving certain outcomes (excluding mortality)[7], the critical shortage of IV PPIs warrants more stringent conservation strategies. Therefore, substituting H2RAs for this indication could be a prudent measure.

** high-risk stigmata have a higher risk of rebleeding and may include active bleeding (spurting or oozing), visible vessel or adherent clot on endoscopy*
***low-risk stigmata are associated with lower risk of rebleeding and may include flat pigmented spots at the base of ulcer (indicated old, resolved bleeding) and clean-based ulcer.*

References

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