Use of Aprepitant (Emend®) for Prevention of Postoperative Nausea and Vomiting (PONV) in Adults

Aprepitant (Emend®) 80 mg capsule is now approved for use in AHS, restricted to PONV prophylaxis in adult patients at high risk of PONV (i.e. baseline risk* of PONV ≥ 60%), undergoing surgery under general anesthesia.

Detailed restrictions for aprepitant are listed on the AHS Provincial Drug Formulary on Insite at [http://intraweb01.albertahealthservices.ca/Pharmacy/AHS_FORMULARY/search_list.aspx?type=search&id=-1&keyword=aprepitant](http://intraweb01.albertahealthservices.ca/Pharmacy/AHS_FORMULARY/search_list.aspx?type=search&id=-1&keyword=aprepitant)

Below is a decision algorithm to assess if your patient meets the AHS Provincial Drug Formulary restrictions for PONV prophylaxis with aprepitant in adult patients undergoing surgery under general anesthesia (comprised of volatile anesthetics and opioids):

**Restriction #1a:**
Patient is at high risk* of developing PONV within 24 hours after surgery

*High risk is defined as the presence of at least 3 of the following risk factors for PONV:
Female gender, history of PONV, non-smoker, postoperative use of opioids.

**Scenario A**

**Restriction #1b:**
Patient has a history of being refractory to other antiemetic treatments or combination antiemetic therapy used for PONV?

**Yes**

Aprepitant PO can be included in the prophylactic antiemetic regimen

**No**

Patient does not meet approved restriction for aprepitant PO for PONV prophylaxis

**Scenario B**

**Restriction 2:**
Patient is at risk of medical sequelae of vomiting?
(I.e. jaw wiring, neurosurgery, upper gastrointestinal surgery)

**Yes**

Aprepitant PO can be included in the prophylactic antiemetic regimen

**No**

Patient does not meet approved restriction for aprepitant PO for PONV prophylaxis

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➢ PREVENTION OF PONV:
  o Aprepitant PO, administered prior to induction of anesthesia, is superior to ondansetron 4 mg IV for the prevention of postoperative vomiting (PV) in high risk patients.
  o No difference between aprepitant and ondansetron for the prevention of postoperative nausea (PN), complete response (i.e. absence of PV and PN), and need for rescue therapy up to 48h post-op.
  o Aprepitant should always be used as part of a multidrug (3 - 4) antiemetic regimen for PONV prophylaxis.
  o U.S. prescribing information recommends using aprepitant PO 40 mg for prevention of PONV; a 40 mg dosage form is not available in Canada. A plateau in response seen with increasing doses of aprepitant suggests that an 80 mg dose is safe and effective for prevention of PONV.

➢ TREATMENT OF PONV:
  o Aprepitant is NOT RECOMMENDED FOR TREATMENT of established PONV.
  o Patients who develop PONV 6 hours or less post-surgery should be treated with an antiemetic agent not used for prophylaxis.

➢ APREPITANT ADVERSE EFFECT PROFILE:
  o Similar to ondansetron. Most commonly headache, lightheadedness and transient elevation of liver enzymes.

➢ IMPLICATIONS FOR PRACTICE:
  o Assessment of baseline PONV risk is required prior to prescribing aprepitant PO.
  o Aprepitant 80 mg PO is administered up to 3 hours prior to induction of anesthesia for prevention of PONV. To avoid the need for repeat dosing when surgery is delayed beyond 3 hours following aprepitant dose administration, administration of aprepitant when the patient arrives in the OR is suggested.

The Apfel Simplified Risk Score for PONV in adults is a reliable predictive model used to stratify patients based on their baseline risk factors to help direct antiemetic therapy which takes into consideration the presence of the following patient-specific risk factors for PONV: female gender, non-smoker, history of PONV, and postoperative use of opioids. The severity of PONV risk is dependent on the number of individual risk factors present at baseline. High risk is defined as the presence of at least 3 of those risk factors.

References:
References are listed in the Pharmacy Backgrounder Newsletter Vol.1 No.1 March 2013, or can be requested by contacting Caroline Ibrahim, Drug Utilization Evaluation pharmacist at Caroline.Ibrahim@albertahealthservices.ca.

For Further Information Please Contact: AHS.PharmacyTherapeuticsDUE@albertahealthservices.ca or AHS.PharmacyDrugStewardship@albertahealthservices.ca