SASKATCHEWAN REGISTERED NURSES' ASSOCIATION

RNs WITH ADDITIONAL AUTHORIZED PRACTICE
CLINICAL DECISION TOOL
AUGUST 2017

HELICOBACTER PYLORI ADULT

DEFINITION

- Ulceration of the mucous membrane of the upper digestive tract due to bacterial infection with *Helicobacter pylori (H. Pylori).*
- *H. pylori* infection plays a key role in the pathogenesis of gastric cancer, gastric mucosa–associated lymphoid tissue (MALT) lymphoma, and peptic ulcer disease.

IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- Pain radiating to back, neck, jaw, left arm or shoulder
- Protracted vomiting
- Active gastrointestinal bleeding (black stools, hematemasis)
- Abdominal mass
- Weight loss (unintentional)
- Dysphagia

CAUSES

- Infection with *H. pylori* bacteria
- The exact way *H. pylori* infects someone is still unknown. It may be passed from person to person through direct contact with saliva, vomit or fecal matter. *H. pylori* may also be spread through contaminated food or water.
- *H. pylori* infection is predominantly acquired in childhood.

PREDISPOSING AND RISK FACTORS

- Prevalence varies considerably with geographic location, ethnicity, and socioeconomic status with increased incidence noted in persons living:
  - in crowded conditions.
  - without a reliable supply of clean water.
  - with someone who has an *H. pylori* infection.

HISTORY

- Epigastric tenderness
- Nausea and vomiting
- Epigastric pain after meals
- Indigestion, bloating and fullness
- Flatulence
- Hematemesis

- Weight loss
- Pain at night time
- Melena stools

PHYSICAL FINDINGS

- In uncomplicated *H. pylori* clinical findings are few and nonspecific but may include:
  - Halitosis
  - Epigastric tenderness
  - Abdominal pain or discomfort
  - Iron deficiency anemia
  - Stool positive for occult blood

DIFFERENTIAL DIAGNOSIS

- Esophagitis
- Functional dyspepsia
- Gastritis
- Gastroenteritis
- Gastroesophageal reflux disease
- Celiac disease
- Cholangitis
- Cholecystitis
- Cholelithiasis
- Esophageal perforation
- Inflammatory bowel disease
- Irritable bowel syndrome
- Abdominal aortic aneurysm
- Acute coronary syndrome
- Barrett's esophagus
- Gastric cancer
- Viral hepatitis
- Zollinger-Ellison syndrome

COMPLICATIONS

- It is estimated that 10% to 20% of *H. pylori* positive patients will have a lifetime risk of developing ulcer disease.

- The lifetime risk of gastric cancer is about 2% for male and 1% for female Canadians.

INVESTIGATIONS AND DIAGNOSTIC TESTS

- *H. pylori* antibody testing (IgG serology)
  - Detects antibodies to the bacteria but will not distinguish a previous infection from the current one.
  - If the test result is negative, it is unlikely that a person ever had an *H. pylori* infection.
- Urea breath test (UBT)
  - UBT is superior to any other diagnostic test with sensitivity and specificity generally exceeding 95%.
  - UBT can also be used for post-treatment testing.
  - Test sensitivity is decreased by medications such as bismuth containing compounds, antibiotics, and Proton Pump Inhibitors (PPIs) that reduce the organism's urease activity or density, therefore a washout period is required. Contact the facility performing the test for washout period instructions.
- *H. pylori* stool antigen test (SAT)
  - Has a lower diagnostic value than UBT.
  - Temperature, consistency of stool, interval between stool sample collection and measurement of stool can affect the results.
  - The use of SAT should only be considered if the UBT is not available.
- Endoscopy with biopsy, referral to specialist required (gastroenterologist or general surgeon).

MAKING THE DIAGNOSIS

- Positive *H. Pylori* result as per diagnostic tests listed above.

MANAGEMENT AND INTERVENTIONS

Goals of Treatment

- Relieve symptoms
- Prevent complications

Appropriate Consultation

- Presentation consistent with those identified in the Immediate Consultation Required in the Following Situations area.
- Usually not necessary unless does not resolve with treatment, symptoms progress or complications arise.

Non-Pharmacological Interventions

- None

Pharmacological Interventions

First Line-Quadruple Therapy

- Pantoprazole (Pantoloc) 40 mg orally bid for 10-14 days
  And
- Amoxicillin (Amoxil) 1000 mg orally bid for 10-14 days
  And
- MetroNIDAZOLE (Flagyl) 500 mg orally bid for 10-14 days
  And
- Clarithromycin (Biaxin) 500 mg orally bid for 10-14 days

First Line-Quadruple Therapy (Penicillin allergy)

- Pantoprazole (Pantoloc) 40 mg orally bid for 10-14 days
  And
- Bismuth subsalicylate (Pepto Bismol) 2 tablets orally qid for 10-14 days
  And
- MetroNIDAZOLE (Flagyl) 500 mg orally tid or qid for 10-14 days
  And
- Tetracycline (tetracycline) 500 mg orally qid ac for 10-14 days

Client and Caregiver Education

- Counsel client/caregiver about appropriate use of medications (dose, frequency, application, compliance, etc.).

Monitoring and Follow-Up

- Follow-up in 7 days or sooner if symptoms progress despite therapy or if symptoms fail to respond to therapy.

Referral

- Conditions listed in the "Immediate Consultation Required in the Following Situations" section.
- Consult physician/RN(NP) if symptoms persist following treatment.

DOCUMENTATION

- As per employer policy

REFERENCES

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