Understanding and Managing Gastrointestinal Side Effects of Common Analgesics

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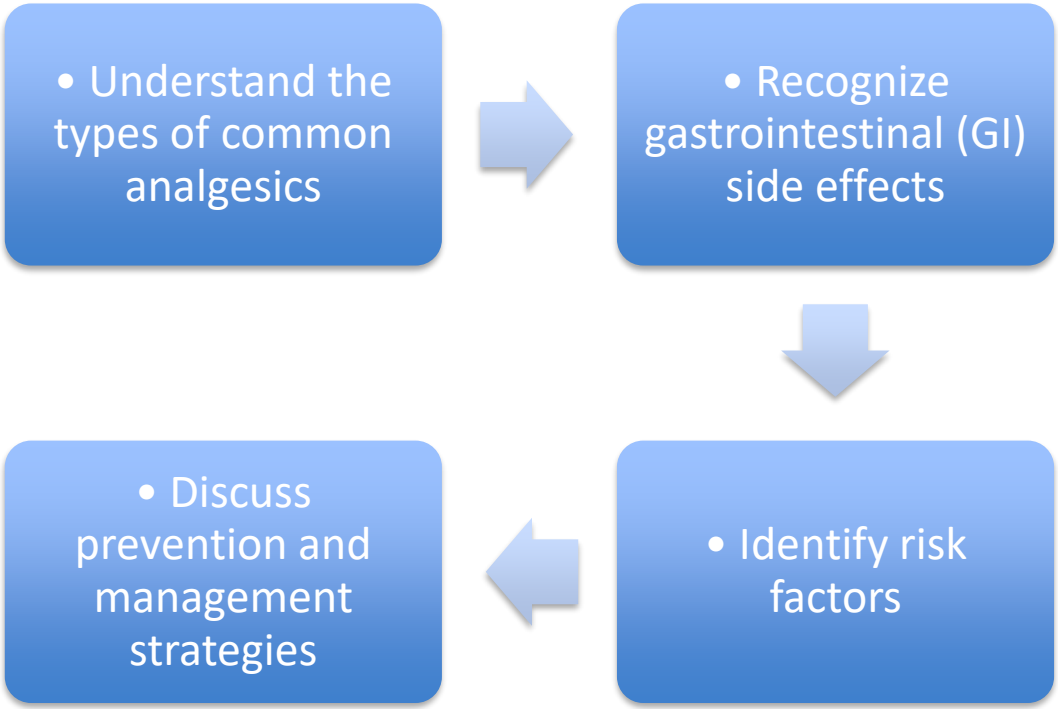
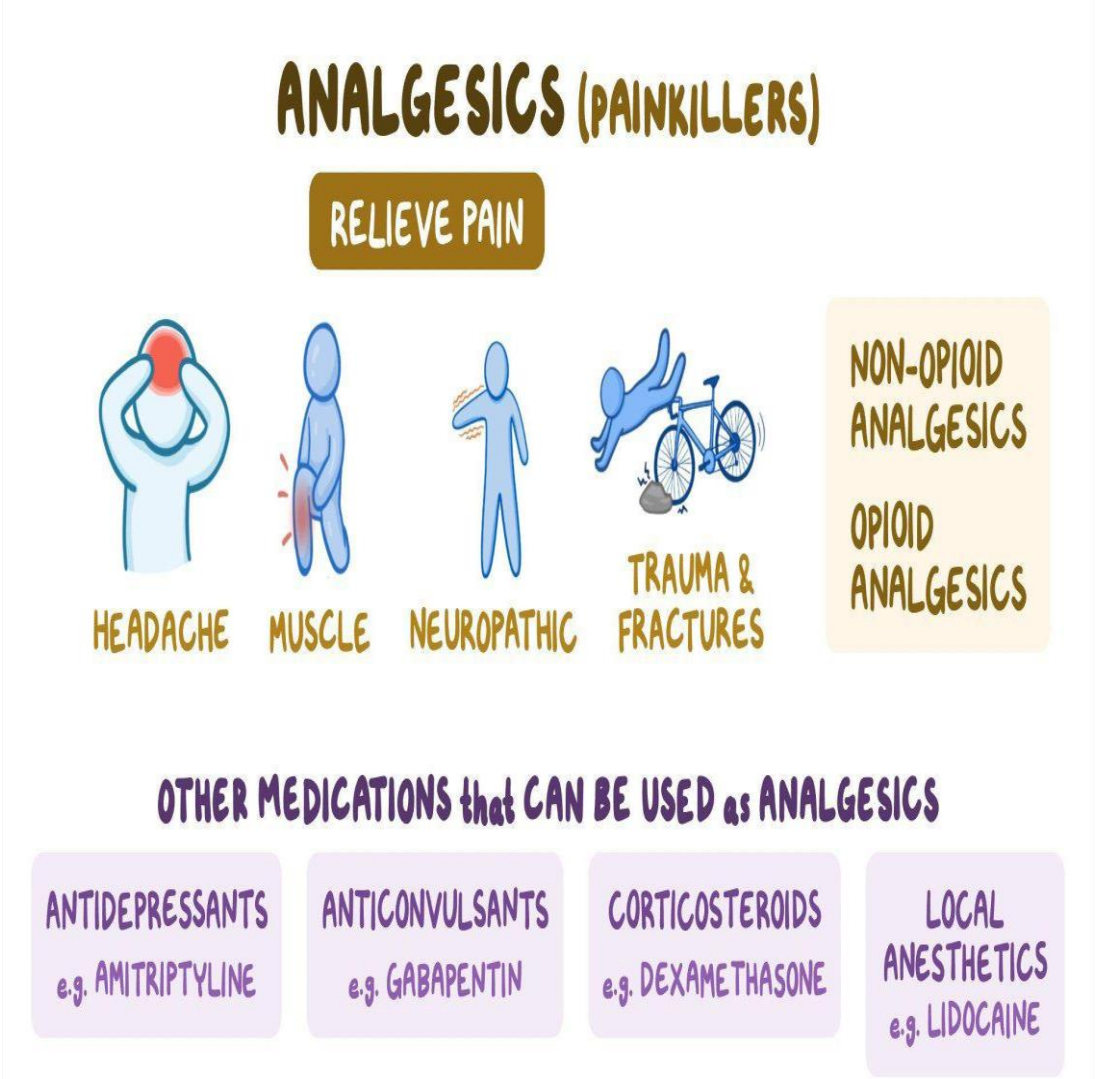
Objectives


• Understand the types of common analgesics
• Recognize gastrointestinal (GI) side effects
• Identify risk factors
• Discuss prevention and management strategies

Overview of Analgesics

- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Opioids
- Acetaminophen/Paracetamol
- Other agents (corticosteroids, COX-2 inhibitors)



NSAIDs – Overview

- Commonly prescribed for pain and inflammation
- Examples: Ibuprofen, Naproxen, Diclofenac
- Mechanism: inhibit COX enzymes (COX-1 and COX-2)

NSAIDs – GI Side Effects

- Dyspepsia, gastritis, peptic ulcer, GI bleeding

- Risk increases with dose, duration, age

- Concomitant medications (anticoagulants, corticosteroids) raise risk

Opioids – Overview

- Strong pain relievers for moderate to severe pain

- Examples: Morphine, Codeine, Tramadol

- Mechanism: bind to opioid receptors (μ, κ, δ)

Opioids – GI Side Effects

- Constipation (most common)
- Nausea and vomiting
- Delayed gastric emptying and bloating

Paracetamol & Others

- Generally safe for GI tract at therapeutic doses

- Main risk: hepatotoxicity at high doses

- Fewer GI adverse events compared to NSAIDs

Mechanisms of GI Injury

- NSAIDs: Inhibition of COX-1 reduces protective prostaglandins
- Decreased mucosal blood flow and bicarbonate secretion
- Opioids: decreased gut motility and increased fluid absorption

Risk Factors for GI Complications

- Age > 60 years
- History of peptic ulcer or GI bleeding
- High-dose or multiple NSAIDs
- Concomitant use of corticosteroids, anticoagulants, antiplatelets
- Alcohol use and smoking

Clinical Presentation

- Epigastric pain, dyspepsia, nausea
- Hematemesis (GI bleeding)
- Constipation, bloating, abdominal pain

Prevention Strategies – NSAIDs

- Use the lowest effective dose for shortest duration
- Prefer COX-2 selective inhibitors for high-risk patients
- Co-prescribe PPIs or misoprostol
- Avoid combining NSAIDs with other ulcerogenic drugs

- Proactive bowel regimen (laxatives)
- Adequate hydration and dietary fiber

Prevention Strategies – Opioids

Management of NSAID-Induced GI Effects

- Discontinue or switch NSAID if possible
- Initiate PPI or H2-receptor antagonist
- Test and treat Helicobacter pylori if indicated
- Endoscopic evaluation if alarm symptoms

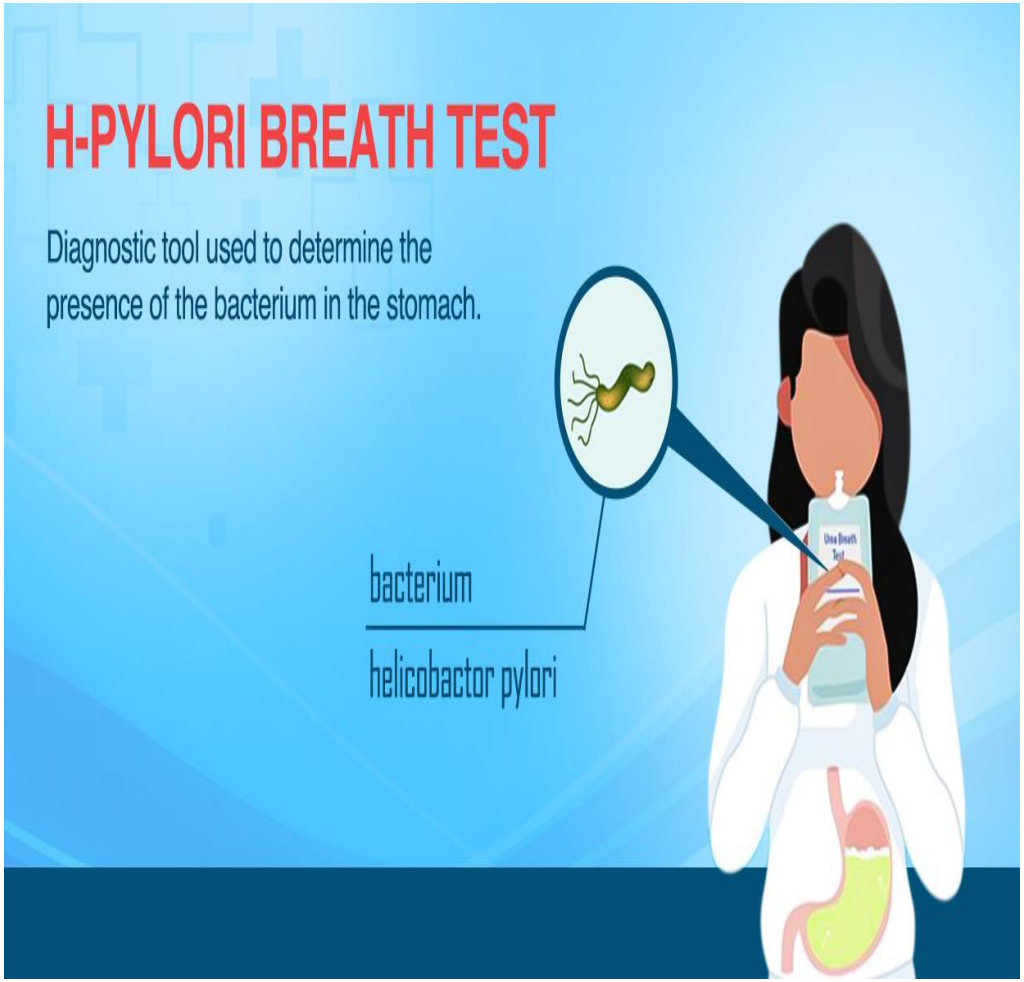
Management of Opioid-Induced Constipation

- First-line: stimulant or osmotic laxatives

- Adjust opioid dose if feasible

Helicobacter pylori Testing

- Test in patients with history of peptic ulcer or GI bleeding
- Eradication therapy reduces risk of recurrence with NSAID use



Patient Counseling

- Educate about signs of GI bleeding (black stools, vomiting blood)
- Encourage reporting of persistent abdominal pain or dyspepsia
- Advise taking NSAIDs with food and avoiding alcohol and smoking

Key Take-Home Messages

- GI SIDE EFFECTS ARE COMMON WITH NSAIDS AND OPIOIDS

- IDENTIFY HIGH-RISK PATIENTS EARLY

- USE PREVENTIVE STRATEGIES AND PATIENT EDUCATION

- MANAGE COMPLICATIONS PROMPTLY

References

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Thank You
For Your
Attention