Opioid-induced bowel dysfunction
Disclosures

I have received honoraria for speaking at satellite symposia from Astra Zeneca, Kyowa Kirin, and Wyeth Pharmaceuticals.

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BACKGROUND
Introduction

- Endogenous opioids regulate GI tract function
- Mu opioid receptors occur throughout enteric nervous system (myenteric plexus, submucosal plexus)
Introduction

Opioid-induced bowel dysfunction (OIBD) ≠ Opioid-induced constipation (OIC)
Introduction
Introduction

Opioid-induced bowel dysfunction:
- Salivary gland dysfunction
- Oesophageal dysfunction
- Gastroparesis
- Sphincter of Oddi dysfunction
- Other problems

Narcotic bowel syndrome
(central effect)
OPIOID-INDUCED CONSTIPATION
Introduction

Functional constipation ≠ Opioid-induced constipation (OIC)
Opioid-induced constipation

Pathophysiology:
- Decreased small bowel motility
- Decreased water & electrolyte secretion small bowel
- Increased tone ileocaecal valve
- Decreased large bowel motility
- Increased water & electrolyte absorption large bowel
- Increased tone anal sphincter
- Reduced anorectal sensitivity (to distension)
Opioid-induced constipation

Rome IV diagnostic criteria:

- New or worsening symptoms of constipation when initiating, changing, or increasing opioid therapy that must include 2 or more of the following:
  a) straining during $> \frac{1}{4}$ (25%) of defaecations
  b) lumpy or hard stools (BSFS 1-2) $> \frac{1}{4}$ (25%) of defaecations
  c) sensation of incomplete evacuation $> \frac{1}{4}$ (25%) of defaecations
  d) sensation of anorectal obstruction/blockage $> \frac{1}{4}$ (25%) of defaecations
  e) manual manoeuvres to facilitate $> \frac{1}{4}$ (25%) of defaecations
Opioid-induced constipation

Rome IV diagnostic criteria:

- New or worsening symptoms of constipation when initiating, changing, or increasing opioid therapy that must include 2 or more of the following:
  - f) fewer than 3 spontaneous bowel movements per week

- Loose stools are rarely present without the use of laxatives
Opioid-induced constipation

Epidemiology:
Common
Opioid-induced constipation
Opioid-induced constipation

Clinical features:
- Abdominal pain
- Anorexia
- Early satiety
- Nausea
- Vomiting
- Abdominal distension
- Diarrhoea ("overflow")
Opioid-induced constipation

Clinical features:
- Flatulence
- Halitosis
- Heartburn
- Intestinal obstruction
- Intestinal perforation
- Anal fissure
- Haemorrhoids
Opioid-induced constipation

Clinical features:
- General malaise
- Confusion
- Headache
- Pulmonary embolism
- Urinary retention
Opioid-induced constipation

Clinical features:
- Psychological problems
- Social problems
- [Health economic burden]
Opioid-induced constipation

“When I am faced with taking a pain med, I will always think about the constipation that might result, and so I will try to take the smallest dose possible or do without”

Opioid-induced constipation

Management:
- Lifestyle measures
- Conventional laxatives
- Rectal interventions
- Lubiprostone*
- Prucalopride*
- Peripherally acting mu opioid receptor antagonists (PAMORAs)*
- Opioid switching
- Other interventions
OPIOID-INDUCED BOWEL DYSFUNCTION
Salivary gland dysfunction:

- general problems (e.g. oral discomfort)
- eating-related problems
- speech-related problems
- poor oral hygiene
- oral infections
- systemic infections
- dental / denture problems
- psychosocial problems
- miscellaneous problems (e.g. oesophagitis)
Oesophageal dysfunction:
- dysphagia (liquids)
- regurgitation
- chest pain
Gastroparesis

Gastroparesis:
- early satiety
- postprandial fullness
- nausea / vomiting
- bloating
- upper abdominal pain
- hiccoughs
Sphincter of Oddi dysfunction:
- biliary colic
- acute pancreatitis
Opioid-induced bowel dysfunction

Management:
- Discontinue opioid (✓)
- Dose reduce opioid (x)
- Switch opioid (√)
- PAMORAs (?)
- Symptomatic management (√)
- Other strategies (?)
Sphincter of Oddi dysfunction

Management:
❖ Switch opioid
   “Good” opioids: buprenorphine, pethidine, tramadol
   “Bad” opioids: fentanyl, morphine, oxycodone, tapentadol, loperamide

❖ PAMORAs
   Prevention: naloxegol (case report)
   Treatment: naloxone (case reports)
Sphincter of Oddi dysfunction

Management:

- Symptomatic management*
  Antispasmodic medication: nifedipine, GTN, hyoscine butylbromide, phosphodiesterase type 5 inhibitor, tricyclic antidepressants, somatostatin analogues, botulinum toxin

- Other strategies
  Sphincterotomy: endoscopic, surgical
CONCLUSION
Conclusion

Message to non-specialists:

Opioids are not the cause of every problem!
Conclusion

Message to specialists:

Opioids can be the cause of many problems

(so it could be the opioid!)