

GI Update

- H PYLORI
- IBD MANAGEMENT
- GI BLEED
- HEPATIC & PANCREATIC
- CANNABIS GUT



Kevin Beyer, DO
Gastroenterologist



H Pylori

H Pylori (Hp)

SPIRAL SHAPED GRAM NEGATIVE ROD

- Lives in gastric mucous layer
- Microaerophilic
- Urease production

COEXISTED FOR THOUSANDS OF YEARS

- Elisa detection in feces of pre-inca mummies

History of Hp Discovery - Microscopic

MICROSCOPIC ERA — CADAVER & SURGICAL SPECIMENS

- 1875: Bacteria found at ulcer margins
- 1906: Spirochetes observed in stomach with gastric CA
- 1924: Urease activity identified in stomach

History of Hp Discovery - Endoscopic

ENDOSCOPIC ERA — MUCOSAL BIOPSY

- 1979: Spiral-shaped bacteria noted in stomach
- 1983: Bacteria named *Campylobacter pylori* with associated gastritis
- 1987: Drs. Warren & Marshall: Koch's Postulate
- 1989: *Helicobacter pylori* by genome
- 1994: WHO determines Hp as carcinogen
- 2005: Drs. Warren & Marshall receive Nobel prize in Physiology & Medicine

Clinical Relevance of Hp

- Gastritis
- Peptic ulcer disease
- Gastric cancer

Hp Diagnosis

- Serology – only confirms prior exposure
- Urea breath test (UBT) & fecal antigen (FA)- denotes active infection
- Histology
- Culture & sensitivity

Hp Management Guidelines

Treatment – 14-day regimen:

- Bismuth quadruple
 - Rifabutin
 - Furazolidone
-
- UBT or FA 4 weeks after treatment -- Positive
 - EGD with biopsy for culture sensitivity
 - Treatment – 14 day regimen based on C&S

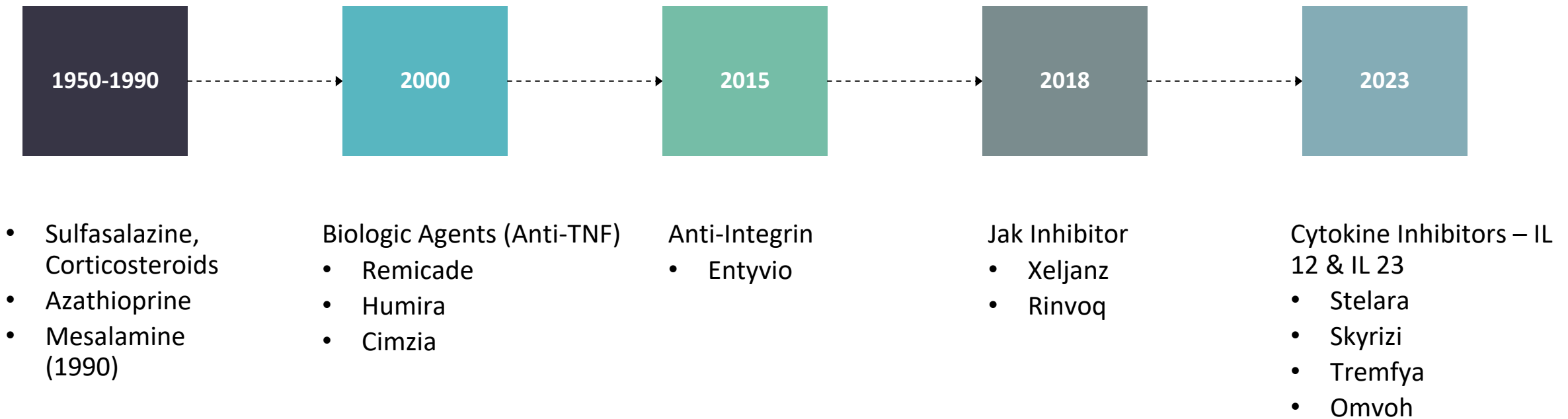
IBD Management

Inflammatory Bowel Disease (IBD)

PREVALENCE & COST

- Ulcerative colitis: 2.5 million cases
- Crohn's disease: 3 million cases
- 2020 IBD related care cost: \$8.5 billion
 - Medications: 70%
 - Inpatient: 18%
 - Office: 10%
 - ER: 2%

IBD Therapeutic Evolution



GI Bleed

GI Bleed & NSAIDs



Overview

- 100 million NSAID prescriptions/year; 40% in those >65
- 20–25% experience GI side effects: dyspepsia, PUD, GI bleed
- GI bleed = 15th leading cause of death in the U.S.
- ASA / NSAID: 4x increased risk
- ASA & NSAID: 9x increased risk



Risk Factors

- Age >65
- PUD history
- Steroids
- Antiplatelets
- Systemic illness



Prevention of GI Side Effects

- Avoid unnecessary NSAIDs
- Use COX-2 inhibitors
- PPI
- H2 blockers
- Misoprostol

Hepatic & Pancreatic

Hepatitis C



Overview

- 1970's & 1980's: Non-A Non-B Hepatitis
- 1989: Hepatitis C
- 2020: 3–4 million cases; 67,000 new infections

Symptoms

- Viral symptoms in 2-12 weeks
- Most are asymptomatic



Risk Factors

- IVDA
- HIV +
- Transfusion or organ transplant
- Need stick or mucosal exposure
 - Health care workers
 - Public safety personnel
 - Tattoo – Prior to 2000
 - Piercings



Diagnostic Approach

Screening Test – Hep C Antibody

- Adults over 19 at least once
- Pregnant patients
- High risk groups

Confirmatory Test

- Hep C PCR – Viral Load
- Hep C Genotype – 1 to 6

Hepatic Steatosis (MASLD/MASH)



Overview

- Nomenclature
 - Fatty liver or NASH - 2010-2023
 - MASLD or MASH – 2024
- Incidence – 30% global population
- Significant cause of liver related morbidity & mortality
 - Cirrhosis – 20%
 - Hepatoma – 2%



Workup

- Exclude other cause of liver disease
- Determine fibrosis score
 - Elastography – ultrasound or MRI liver biopsy



Management

- Weight loss
- Glucose & lipid control
- Exercise
- Medication
- Diet – Mediterranean & low-fructose

Pancreatic Disorders

1

Exocrine pancreatic insufficiency (EPI)

2

Intraductal papillary mucinous neoplasm (IPMN)

3

Pancreatic Cancer (PC)

Pancreatic Disorders: EPI



Overview

- EPI – Abnormal secretion of pancreatic juice with decreased lipase activity
- Incidence – 10% population
 - Majority occur in chronic pancreatitis or cystic fibrosis



Symptoms

- Dyspepsia
- Bloating
- Loose stools
- Weight loss



Diagnosis & Management

Diagnosis

- Abnormal fecal elastase

Management

- Pancreatic enzyme replacement
- Low fat diet

Pancreatic Disorders: IPMN



Overview

- IPMN – Epithelial cystic tumors of mucin producing cells in pancreatic duct



Symptoms

- Pancreatitis
- Weight loss
- Diabetes



Diagnosis & Management

Diagnosis

- Imaging – CT, MRI or EUS

Treatment

- Observation – most are indolent
- Surgery
 - Main duct over 10 mm size
 - Obstructive jaundice
 - Cytology +
 - Enhancing nodule or solid component

Pancreatic Disorders: Cancer



Overview

- No screening guidelines in general population
- 3rd most common cause of CA death & projected to be 2nd by 2030
- Lowest 5-year survival of major organ cancers
 - 44% local disease
 - 16% regional
 - 3% metastatic



Genetic Syndromes

- Peutz-Jegher
- Hereditary pancreatitis
- Specific gene mutations



Screening Guidelines

- High risk group for screening:
 - First-degree relative with PC & 2 other genetic relatives with PC
- Screening guidelines: Yearly EUS & MRI

Cannabis Gut

Cannabis & the Gut



Overview

- Use increasing with legalization & medical marijuana
- MOA: G-protein receptors (CB1/CB2)
 - Brain
 - Enteric nervous system
 - Gut epithelial cells
- Impacts:
 - Decrease gut motility
 - Alteration of gut microbiome & secretions
 - Decrease inflammation & edema

Cannabis Effects on GI

Nausea



Low-dose: Anti-emetic
High-dose: Pro-emetic
Refractory to traditional anti-emetics
Change in thermoregulatory function

Gastroparesis



Due to altered brain-gut sensory input & motor dysfunction

GERD



Decreased LES pressure & altered gut motility

PUD



May decrease ulcer healing

Pancreatitis



Direct action on CB receptors or sphincter of ODDI effect

IBD & IBS



Potential benefit with turmeric in observational studies

Q&A
