COLORECTAL CANCER AND PREVENTION

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LEARNING OBJECTIVES

- Identify risk factors for colorectal cancer (CRC)
- Identify high risk populations for CRC
- Identify types of colon polyps
- Identify options for CRC screening
- Identify ways to overcome patient barriers for colonoscopy completion

CRC STATISTICS

- Third most common cancer in men and women
- Second most common cancer related death
- 1.8 million new cases worldwide in 2018
- 861,000 deaths worldwide in 2018
- 145,600 new cases annually in the United States
- 50,630 deaths annually in the United States
- 5% lifetime risk in United States

COLORECTAL CANCER (CRC)

- More specifically colorectal neoplasia
- Neoplasia include colon and colorectal polyps
- Adenomas (precancerous) colon polyps
- Colorectal adenomas cause 95% of colorectal cancer

COLON POLYPS

- Benign
  - Hyperplastic
  - Inflammatory
  - Others
- Precancerous
  - Tubular adenomas
  - Tubulovillous adenomas
  - Sessile and traditional serrated adenomas

COLON CANCER RISK FACTORS

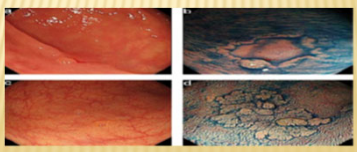
- First-degree relative especially if under age 60
- Prior CRC or history of adenomatous polyps
- Increasing age
- Lifestyle choices:
  - Dietary: Red and/or processed meats
  - Cigarette smoking
  - Alcohol use
  - Obesity and sedentary lifestyle
  - Diabetes mellitus

CRC RISK FACTORS

- Inflammatory Bowel Disease (IBD)
  - Includes Crohn's disease with colonic involvement of inflammation and ulcerative colitis
    - Risk increased if greater than 30% of colon
    - Risk increased if proctosigmoiditis
    - Risk increased if IBD for 8 years or longer
    - Risk increased if ulcerative colitis with PSC (primary sclerosing cholangitis)

CRC RISK FACTORS

- Lynch Syndrome
  - Hereditary nonpolyposis colon cancer
  - Accounts for less than 1 in 20 cases of CRC
  - 70-80% will have CRC by age 40-50 years
  - Increases risk for other types of cancer
  - Leads to colectomy sparing the rectum



CRC RISK FACTORS

- Familial Adenomatous Polyposis (FAP)
  - Uncommon inherited condition
  - Causes hundreds of polyps
  - Nearly 100% will develop CRC during their lifetime
  - CRC occurs mostly before age 40
  - Commonly leads to total proctocolectomy

SIGNS OF COLORECTAL CANCER

- Most commonly asymptomatic
- Symptoms often indicate later stage of malignancy:
  - Rectal bleeding
  - Change in bowel habits
  - Signs of bowel obstruction (left colon)
  - Anemia with stool positive for occult blood
  - Weight loss

CRC SCREENING

- Goal is to prevent deaths from CRC
  - Most CRC develop from precancerous polyps
  - Identify and resect precancerous abnormal growths
  - Recommendation to begin at age 50
  - American Gastroenterology Association recommends starting at age 45
  - Screening between age 76 and 85 is individualized

CRC SCREENING

- Colonoscopy
  - 15-20 minutes to assess colon to terminal ileum
  - Involves bowel prep (biggest barrier)
  - Detects small and large polyps
  - Substantially reduces the risk of dying from CRC
  - 1 in 1,000 risk for bleeding
  - 1 in 10,000 risk for intestinal wall injury or perforation

CRC SCREENING

- CT Colonography
  - CT scanner test used to examine the entire colon
  - Requires a bowel preparation
  - Non-invasive and no sedation required
  - May not be covered by insurance
  - Requires colonoscopy if abnormalities found
  - Likely misses small, flat adenomas

CRC SCREENING

- Stool tests (FIT versus Cologuard)
- Easy to complete and non-invasive
- Polyps almost never produce positive results
- If positive, colonoscopy is recommended
- High rate of false positives and false negatives
- False positive possible with ASA, NSAIDs, and red meat

CRC SCREENING

- Guaiac Test
  - Collect 2 samples from three consecutive stools
  - Avoid ASA and NSAIDs before the test
  - Must avoid peroxidase containing foods for 72 hours
- Fecal Immunochemical Test (FIT)
  - Long-handled tool to collect specimen
  - No need to avoid ASA and NSAIDs
- Cologuard
  - Looks for specific DNA markers and blood
  - One stool sample
  - No need to avoid ASA and NSAIDs
  - Superior to other stool tests

CRC SCREENING

- Frequency of colonoscopy varies
  - Risk factors: Personal history and family history
  - Type of polyps: Histology and pathology findings
  - Polyp size
  - Number of polyps
  - Bowel prep effectiveness

OVERCOMING BARRIERS

- Education is the most important component in CRC prevention
- Preparation
  - Newer options: Suprep and Plenvu
  - Better tolerated
- Procedure
  - Outpatient centers or hospital based
  - Conscious sedation or monitored anesthesia
- Time
  - 15-20 minutes exam typically

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