Quick Review: Cancer Of The Large Intestine
B Phillips, C Perry

Citation

Abstract
150,000 new cases of Colorectal CA are diagnosed each year in the United States and 60,000 people die of this disease annually. The actual incidence increases with age: at age 50, 0.39 per 1000 persons/yr; at age 80, 4.5 per 1000 persons/yr. Carcinoma of the colon (particularly the right side) is more common in women while carcinoma of the rectum is more common in men.

RIGHT COLON
- Unexplained Weakness or Anemia
- (+) Occult Blood
- Dyspeptic Symptoms

LEFT COLON
- Change in Bowel Habits
- (+) Gross Blood
- Obstructive Symptoms

RECTUM
- Rectal Bleeding
- Intrarectal Tumor
- Sigmoidoscopic Findings

INCIDENCE
150,000 New Cases of Colorectal CA are Diagnosed Each Year in the USA
60,000 People Die of this Disease Each Year
Incidence Increases with Age:
- Age 50, 0.39 per 1000 persons/yr
- Age 80, 4.5 per 1000 persons/yr

GENETIC PREDISPOSITION HAS BEEN WELL DOCUMENTED
1. Familial Adenomatous Polyposis (Chromosome 5)
2. Cancer Family Syndrome (Lynch II): Early Onset (age 20 -30) Proximal Dominance Endometrial Carcinoma
3. Hereditary Site-Specific Colon Cancer (Lynch I)
4. Ulcerative Colitis
5. Crohn's Colitis
6. Schistosomal Colitis
7. Exposure to Radiation

MECHANISMS OF SPREAD
Direct Extension [Carcinoma grows Circumferentially]
Hematogenous Metastasis [Portal Venous Blood to the Liver]
Regional Node Metastasis [Most Common Form]
Transperitoneal Metastasis [“Seeding” - through the Serosa]
Intraluminal Metastasis [Rare !]

**DUKE’S CLASSIFICATION**
1. Limited to the Bowel Wall
2. Extension through the Bowel Wall with Negative Nodes
3. Regional Node Metastasis

**DUKE’S MODIFICATION**
- C₁ - Regional Node Metastasis
- C₂ - Node Involvement at the Point of Vessel Ligation

**ASTER COLLER MODIFICATION**
- A - Limited to Mucosa
- B₁ - Extension into the Muscularis Propria
- B₂ - Extension through the Muscularis Propria
- C₁ - Limited to the Bowel Wall, with Positive Nodes
- C₂ - Involvement of the Entire Bowel Wall, with Positive Nodes

“D” - Distant Metastases or Unresectable Lesions (Not Formally Included in Any Classification)

**AVERAGE 5-YR. SURVIVAL RATES USING DUKE’S**
- Stage A - 80 %
- Stage B - 60 %
- Stage C - 30 %
- Stage D - 5 %

**SOME POINTS**
1. Approximately 10 % of lesions are Not Resectable at the time of operation
2. An Additional 20 % of patients have liver or other distant metastases
3. Operation, for Cure, can only be performed on about 70 % of all patients
4. Operative Mortality Rate : 2 - 6 %
5. Survival Rate of Patients undergoing Curative Resection is 55 %
6. Overall Survival Rate (all stages) is 35 %

**TNM CLASSIFICATION OF COLORECTAL CANCER**

**PRIMARY TUMOR (T)**
- Tx: Primary Tumor Cannot Be Assessed
- To: No Evidence of Primary Tumor
- Tis: Carcinoma in situ
- T₁ : Tumor invades the Submucosa
- T₂ : Tumor invades the Muscularis Propria
- T₃ : Tumor invades into the Subserosa
- T₄ : Tumor perforates the Visceral Peritoneum (or directly invades other organs)

**REGIONAL LYMPH NODES (N)**
- Nx : Regional lymph nodes can not be assessed
- No : No regional lymph node metastasis
- N₁ : Metastasis in one to three pericolic or perirectal lymph nodes
- N₂ : Metastasis in four or more pericolic or perirectal lymph nodes
- N₃ : Metastasis in any lymph node along the course of a named vascular trunk

**DISTANT METASTASIS (M)**
- Mx : Presence of metastasis cannot be assessed
- Mo : No Distant Metastasis
- M₁ : Distant Metastasis

**References**
Author Information

Bradley J. Phillips, MD
Dept. of Trauma & Critical Care, Boston University School of Medicine, Boston Medical Center

Charles W. Perry, MD
Dept. of Surgery, University of Arizona