

RECTAL CARCINOID

Term Carcinoid “Carcinoma like” first used by Oberndorfer in 1907 to describe these rare, slow growing tumors, which he believed to be less aggressive than adenocarcinoma

- Arise from enterochromaffin (stain with potassium chromate-contain serotonin) cells of GI tract
- Age adjusted incidence for men and women reported as 1.9 per 100, 000 in USA population based study from 1992-1999. 13% had mets at time of diagnosis. Overall 5 year survival 82%
- Other studies reported higher incidence for Caucasians, and as high as 4.48 and 3.98 per 100, 000 for Black men and women respectively

Classification according to embryological origin

Foregut: respiratory tract, stomach, duodenum, biliary system and pancreas

Midgut: small bowel, appendix, cecum and proximal colon

Hindgut: Distal colon , rectum, and genitourinary tract

Histologic characteristics

- Typical- well differentiated, containing small regular cells with rounded nuclei,
- or atypical- increased nuclear atypia, greater mitotic activity, and areas of necrosis
- **However, malignancy does not correlate with histologic appearance**
- Metastatic potential correlates with size and site of primary tumor
- Site: small intestine and colon with highest metastatic potential
- Rectal, bronchopulmonary, or gastric origin likely to be localized

Most common gastrointestinal neuroendocrine tumors.

- 67-74% occur in GI tract
 - Small Bowel 42%
 - Rectum 27%
 - Stomach 9%
- Appendix reported as second most common location in some studies.
- Most common neoplasm in the appendix-1 in 300 appendixes contain a carcinoid
- Other locations include bronchopulmonary system (25%), ovary
- Multiple lesions: ? common growth factor stimulus
- Significant association with other noncarcinoid tumors

Symptoms

- Frequently asymptomatic (33%),
- or may complain of vague, non-specific abdominal pain
- Carcinoid syndrome: cutaneous flushing, diarrhea occur only in 10% of patients with small bowel carcinoid
- Obstruction secondary to a desmoplastic reaction in the mesentery which leads to fibrosis
- Weight loss

Diagnosis

- Measure relevant specific peptides & amines
- Gastric carcinoid: elevated histamine
- Small bowel: Substance P, serotonin, urinary 5-hydroxyindoleacetic acid (HIAA)
- Additional studies: Ultrasound, CT, MRI, selective mesenteric angiography, and endoscopic ultrasound

Rectal Carcinoid

- 50% are asymptomatic. May complain of discomfort, bleeding, change in bowel habits.
- **Carcinoid syndrome is rare** despite positive staining for amines and peptides. Average age at diagnosis 58, higher in African Americans, no gender preference
- May be found on rectal exam as a nodular mass or endoscopy
- Gross appearance: well circumscribed, slightly elevated, round, submucosal hard nodule covered with normal mucosa
- On cut section yellow gray or tan due to high lipid content
- Histologically ribbon type is most common, followed by mixed and acinar
- Size correlates with likelihood of metastasis
 - <1 cm: rare metastases- local transanal excision
 - 1-2 cm & no nodes: consider on individual basis- wide excision with meticulous evaluation to exclude muscular invasion
 - >2cm: LAR or APR
- Present with metastasis in 14% of cases. Common sites are liver, lungs and bone
- Associated with noncarcinoid tumors in 9.2%
- 5 year survival for localized, regional or distant metastases over last decade reported as 90, 49 and 26% respectively

References:

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