



Round : General surgery

Group no : B3

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Gastric neoplasm:

✨ GC is the third leading cause of cancer deaths worldwide, following only lung and colorectal cancer in overall mortality.

🌸 Mainly in elderly and tend to be poor prognosis

🌸 H.pylori increase the risk of GC 3-6 folds

🌸 Associated more with intestinal than the diffuse type more with CA of the antrum, fundus, and body than CA of the cardia.

✨ Previous gastric surgery also increase the risk

✨ Low serum Immunoglobulin

🌸 Molecular and chromosomal alterations (deletion of P53 or expression of aberrant P53 protein)

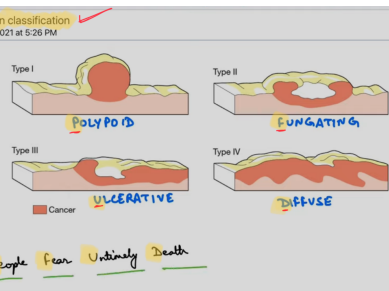
🌸 Overexpression of EGFR and C-ERBB-2 are early events while P53 mutation is a late event

✨ Adenomatous gastric polyps are pre malignant

✨ Patients with multiple gastric polyps should be considered for gastrectomy

🌸 Nearly all the stomach cancer are adenocarcinoma (begins in the mucus producing cells in the innermost lining of the stomach) mainly found in gastric Cardia

✨ Intestinal adenocarcinoma are well differentiated unlike diffuse adenocarcinoma that are poorly differentiated



LAUREN CLASSIFICATION	
Intestinal-type Tumors	Diffuse-type Tumors
Glandular structure	Tiny clusters of small cells
Diffuse inflammatory cell infiltration and frequent intestinal metaplasia	Widespread through the mucosa, less inflammatory infiltration
Preceded by a pre-cancerous process and predominate in region with + incidence of gastric Ca	More often in women, in younger patients, and in regions where gastric cancer is less common
As regional gastric cancer risk is +, it experiences most of the reduction.	As the incidence of gastric Ca in the cardia +, it is seen with + frequency.
	Frequent lymphatic invasion, intraperitoneal metastases, have a poorer prognosis.

PRIMARY TUMOR (T)	
TX:	Primary tumor cannot be assessed
T0:	No evidence of primary tumor
Tis:	Carcinoma in situ: intraepithelial tumor without invasion of the lamina propria
T1:	Tumor invades lamina propria or submucosa
T2:	
T2a:	Tumor invades muscularis propria
T2b:	Tumor invades subserosa
T3:	Tumor penetrates the serosa (visceral peritoneum) without invading adjacent structures
T4:	Tumor invades adjacent structures

🌸 The regional lymph nodes are the peri-gastric nodes, found along the lesser and greater curvatures, and the nodes located along the left gastric, common hepatic, splenic, and celiac arteries. Otherwise consider distant mets

NX:	Regional lymph node (s) cannot be assessed
N0:	No regional lymph node metastasis
N1:	Metastasis in 1-6 regional lymph nodes
N2:	Metastasis in 7-15 regional lymph nodes
N3:	Metastasis in > 15 regional lymph nodes

✨ double contrast barium meal findings: polypoid mass non-distensible stomach and Ulcer crater lies in a mass and does not extend outside the boundary of the gastric wall

Linitis plastica (leather bottle):

✨ Type of adenocarcinoma that spread to the muscles of the stomach make it thicker and rigid most common cause is primary gastric cancer

🌸 **Not** associated with *H. pylori* infection or chronic active gastritis

🌸 Genetic factors play an important role such as **CDH-1** gene and **HER-2** gene

✨ On microscopic appearance: stromal hypertrophy and hyperplasia with poorly differentiated adenocarcinoma and 🌸 signet ring cells 🌸

✨ CT scan with contrast is the gold standard for initial diagnosis

Management in GC:

✨ patient who had the distal mets without obstruction or bleeding shouldn't be explored But if there is obstruction or bleeding consider exploration as palliative resection better than palliative bypass

✨ Total gastrectomy with esophagojejunostomy for Proximal third gastroesophageal junction or extensive Middle third lesions للمريض انه احسن radical operation through thoracoabdominal approach

Chemoimmunotherapy has greatest advantage with stage 3 and 4 who underwent R0 resection

Surgical resection and lymphadenectomy can be described as follows

- o D0 resection = incomplete removal of peri-gastric LN.
- o D1 resection = complete removal of peri-gastric nodes.
- o D2 resection = D1 + LN along the named arteries of the stomach.
- o D3 resection = D2 + removal of the nodes of the celiac axis.
- o D4 resection = D3 + para-aortic nodes.

Curable in Early GC

2. What is the typical first-line therapy for low-grade MALT lymphoma of the stomach?

- a. Chemotherapy
- b. Radiation
- c. Total gastrectomy
- d. Wedge resection of lesion without reconstruction
- e. *H. pylori* eradication

2. Answer: e. Low-grade mucosal-associated lymphoid tissue lymphomas of the stomach are thought to arise as a result of *H. pylori* infection. First-line treatment of this disease begins with *H. pylori* eradication, which often results in a cure.

4. What is true regarding gastrointestinal stromal tumors?

- a. Local recurrence is uncommon after resection
- b. Lymphadenectomy should be attempted given high propensity of lymph node metastasis
- c. Imatinib is first-line therapy for metastatic or recurrent disease with the most common KIT and PDGFRA mutations
- d. En bloc resection of involved structures should not be attempted
- e. Tumors are highly radiosensitive

4. Answer: c. Imatinib is first-line therapy for metastatic or recurrent gastrointestinal tumors.

5. What is true among the treatment principles for gastric cancer?

- a. Distal tumors comprise the majority of gastric cancers
- b. There is a low risk of recurrence of disease
- c. Lymphadenectomy is not required in early-stage disease
- d. A minimum of 15 lymph nodes should be resected during lymphadenectomy
- e. Early gastric cancers always require total gastrectomy

5. Answer: d. A minimum of 15 lymph nodes should be resected during gastric cancer lymphadenectomy for adequate staging and possibly therapeutic control.