

Gastric Carcinoma

- 3rd leading Cause of death, Malignant.
- Poor prognosis

Risk Factors

Family history,
Smoking, Alcohol,
Obesity, Age,
Tobacco

For adenocarcinoma

- Male, H. Pylori, Type A Blood
- Diet: Nitrate, Nitrosamines,
↑ Salted / Pickles / Smoked foods
- Autoimmune gastritis
- Pernicious anemia
- Achlorhydria

Gastric Cancer

Protective Factors

- Diet rich in Fruits, Vegetables, Fiber, Folate, O^+ve

Types

- 1) Adenocarcinoma → From Columnar Glandular epithelium
- 2) Lymphoma → Lymphocytes
- 3) Carcinoid Tumor → G-cells in stomach
- 4) Leiomyosarcoma → Smooth muscle cells

1) Adenocarcinoma

- Most common type of gastric cancer
- Originating from Columnar glandular epithelium
- Two Types:
 - 1) Intestinal (Well differentiated)
 - 2) Diffuse (Undifferentiated)

1) Intestinal Type

- Caused by H. Pylori

↓
Atrophic Gastritis

↓
Damage Epithelium → Gastritis

↓
Achlorhydria

↓
Intestinal

metaplasia

← H. Pylori,
Diet, Smoke

↓
Bacterial
colonization

↓
Nitrosamines

↓
Dysplasia

- Mutation in Tumor Suppressors (stop) & Proto-oncogene (go).

Histology

Malignant $\rightarrow$ Metastasis

- Large, Irregular ulcers.
- Histologically well differentiated.

1) Diffuse type

- Any part of the stomach -
- Mutation of CDH1 gene which codes for E-Cadherin which helps in cell sticking together.

No sticking and increasingly invade.

Findings

1) Gastric linitis = "leather Bottle" appearance of the stomach, due to submucosa thickens and more rigid in diffuse type.

2) Histology $\rightarrow$ "Signet Ring cells" - nucleus is pushed outside.

3) Lymphomas (MALT lymphoma)

- Very Rare.
- Lymphocytes in MALT.
- Chronic infection $\rightarrow$ B-cell proliferation
- Mutation $\rightarrow$ lymphoma.
- Histology $\rightarrow$ Diffuse lymphocytes.

3) Carcinoid tumors - Rare

- Neuroendocrine cells of G cells.
- Well differentiated.
- Looks like polyp.
- Occur also in intestine or pancreas.
- due to presence of G cells.



Nucleus

1) Leiomyomas

- Very Rare.
- From smooth muscle cells.
- hook like spindle, Epithelial cells.

Complications

(1) Metastasis

↳ 1) Peritoneum

2) lymph node around, umbilicus (Sister Joseph nodule)

3) Virchow's node (Troisier's sign).

4) Ovarian (Krukenberg Tumor).

5) Distant organs (liver, etc).

(2) Paraneoplastic syndromes

1) Cancer cells → Growth factor → Keratinocyte.

↓
Sebaceous keratosis
(Clethr-Jelast sign).

2) Inflammation/ Necrosis of the medium

sized arteries → kidney failure.

Polyarteritis

Myocardial infarction.

Nodosa

3) Cancer cells → Tissue factor → Coagulation cascade

migratory Thrombosis.

(Trousseau syndrome).

4) Cancer near Gastroesophageal junction

↓
Pseudoachylasia syndrome.

5) Acanthosis nigricans in axilla.

TNM Classification

5 Stages (0-4).

4 → Distant metastasis.

↓
only Gastric mucosa

Clinical Features → Slow symptoms
Early → Malaise, loss of Appetite, Bloating
Pain, Dyspepsia
Progressive → Nausea, Vomiting, Weight loss.
Epigastric pain
With ulcer → Anemia, Haematemesis, Melena.

Signs

- 1) Sister's Joseph Nodule →
- Palpable node in bulging into the umbilicus
as a result of metastasis of malignant
cancer from pelvis on abdomen.
- Palpable mass D/D → Hernia, Endometriosis, Inguitis.
- 2) Moiré's sign, 3) Lemon-Jelly sign
- 4) Absent bowel sounds.

Diagnosis

- 1) Haematology →
→ ↓ RBC → Anemia
- 2) Imaging → X-ray with Barium Meal,
CT Scan → spread, PET/CT → FSG
- 3) Upper Gastroendoscopy with Biopsy
→ Different tumors, Irregular ulcer.
- 4) H. Pylori → Biopsy urease test,
Urea Breath Test,
Stool Antigen test, Serum IgG.

Treatment

- 1) Surgery
- 2) Chemotherapy
- 3) Radiotherapy
- 4) Immunotherapy

Prognosis - 5 years