



Dr. Alaa El-Suity

The captain of men of death  
Gastric cancer

*“His heart can not be pure  
whose tongue is not clean”*

# GASTRIC TUMOURS

- Aetiology of Gastric cancer
- Types of Gastric cancer
- Pathology of Gastric Cancer
- Evaluation of Gastric Cancer
- Treatment of Gastric Cancer

**Story:**  
**Kinsman Antonio**

## ■ Types of Malignant Tumours:

- a. Adenocarcinoma
- b. Leiomyosarcoma
- c. Lymphomas
- d. Carcinoid Tumours

## AETIOLOGY:

- Gastric cancer is the second most common fatal cancer in the world with high frequency in Japan.
- The disease presents most commonly in the 5<sup>th</sup> and 6<sup>th</sup> decades of life and affect males twice as often as females.

*Contn...*

# Predisposing factors

- The cause of the disease multistep process but several predisposing factors attributed to cause the disease :

a. Environment : - Japan

b. Diet: - Smoked salmon fish (nitrosamine)

c. Heredity: - Napoleon Bonapart  
- Lefrumni syndrme  
- Blood group A

→ Proximal gastric cancer

D. Infection with H.Pylori → Distal gastric cancer

# E. Precursors of gastric cancer

- 1- Pernicious anaemia**
- 2- Previously existing ulcer**
- 3- Previously existing stump**
- 4- Adenomatous polyp**
- 5- Chronic atrophic gastritis**
  - Metaplasia type II & type III**
- 6- Menetrier's disease**
- 7- Agammaglobulinaemia**



# Pathology

## Site:

**Pyloric 50%**

**Lesser curve 20%**

**Cardia 10%**

**Greater curve 5%**

**Fundus 5%**

**Diffuse 10%**

# Classification of gastric cancer

## I) gross types

Type I: Cauliflower mass

Type II: Malignant ulcer

Type III: Colloid carcinoma

Type IV: Linitis plastica

Type V: Malignant on top of benign ulcer

# **II) Lauren classification (DIO)**

**Histopathological classification**

**Intestinal type**

**Diffuse type**

**Others**

# III) Japanese classification

## A) Early:

### 1- limited to mucosa and submucosa

Type I: protruded mucosal

Type II: elevated mucosal & submucosa

Type III: flat

Type IV: Depressed

Type V: Excavated

### 2- Early simulating advanced gastric cancer:

LN involvment

## **B) Advanced: Bormann's classification**

*Invade muscle coat with or without nodal involvement*

Type I: Protruding mass partially invades muscle coat

Type II: Malignant ulcer partially invades muscle coat

Type III: Mass involving all muscle coat reaching  
serosa

Type IV: Serosal involvement

## IV) Ming's classification

- Expanding

- Infiltrative

## V) WHO Classification (microscopic)

### 1) Adenocarcinoma:

- papillary - tubular - mucinous
- Signet ring (colloid)

### 2) Adenosquamous

### 3) Squamous

### 4) Small cell carcinoma

### 5) undifferentiated

# STAGING OF GASTRIC CANCER:

**a.** TNM System

**b.** CT Staging

**c.** PHNS Staging System (Japanese)

- P-factor (Peritoneal dissemination)
- H-factor (The presence of hepatic metastases)
- N-factor (Lymphnodes involvement)
- S-factor (Serosal invasion)



## SPREAD OF GASTRIC CANCER:

- The diffuse type spreads rapidly through the submucosal and serosal lymphatic and penetrates the gastric wall at early stage, the intestinal variety remains localized for a while and has less tendency to disseminate.

The spread by:

1. Direct (loco regional)
2. Lymphatic
3. Blood (Haematogenous)
4. Transcoelomic

# EVALUATION OF GASTRIC CANCER:

- History
  - Clinical Examination
  - Investigations
- 
- **The clinical features of gastric cancer may arise from local disease, its complications or its metastases.**

# Clinical presentation

I) Neodyspepsia group

II) Dyspepsia group

III) Cachexia group

IV) Mass group

V) Obstructive group

VI) Paraneoplastic S - Acanthosis nigricans

- Hypoglycaemia

- Trousseau sign

VII) Complication group

- - Hge
- - Perforation

## VIII) Metastatic group:

- Liver - Bone - Brain - Peritoneum - Lung

Blummer shelf

Sister Mary Joseph nodules

Irish Nodes (Lt axilla)

Virchow LN

Krukenberg tumor

# INVESTIGATIONS:

**A.** Upper gastero intestinal endoscopy  
with multiple biopsy and brush  
cytology

**B.** Radiology:

- CT Scan of the chest and abdomen
- USS upper abdomen
- Barium meal

**C.** Endoluminal U/S

**D.** Diagnostic laparoscopy

**E.** Tumor markers: for follow up

- Low type I pepsinogen

- CEA      - CA19-9                      - CA 72-4

# TREATMENT OF GASTRIC CANCER:

## ■ **Surgery** (Early or Advanced Cancer)

- Distal tumours which involve the lower ½ (sub-total or partial gastrectomy).
- Proximal tumours which involve the fundus, cardia or body (total gastrectomy).

- **Inoperable tumours:** Whenever possible it is advisable to do even a limited gastric resection. If resection is impossible an anterior gastrojejunostomy.

# Japanese concept in treatment of gastric cancer

## Dissection

**D1: Dissection of station I**

**D2: Dissection of station I + station II**

**D3: Dissection of station I + station II + station III**



- Chemotherapy for gastric cancer

(Pre-operative & post-operative)

- Radiotherapy

(Pre-intra & post-operatively)

# OTHER GASTRIC TUMOURS:

## ■ Gastric Lymphomas:

- Primary lymphomas of the stomach of the non Hodgkin's type (NHL).
- The symptoms are similar to those of gastric cancer (adenocarcinoma).
- The diagnosis is made principally from endoscopic examination with biopsy and cytology.
- CT Scanning is important in staging the disease.

- **Treatment:**

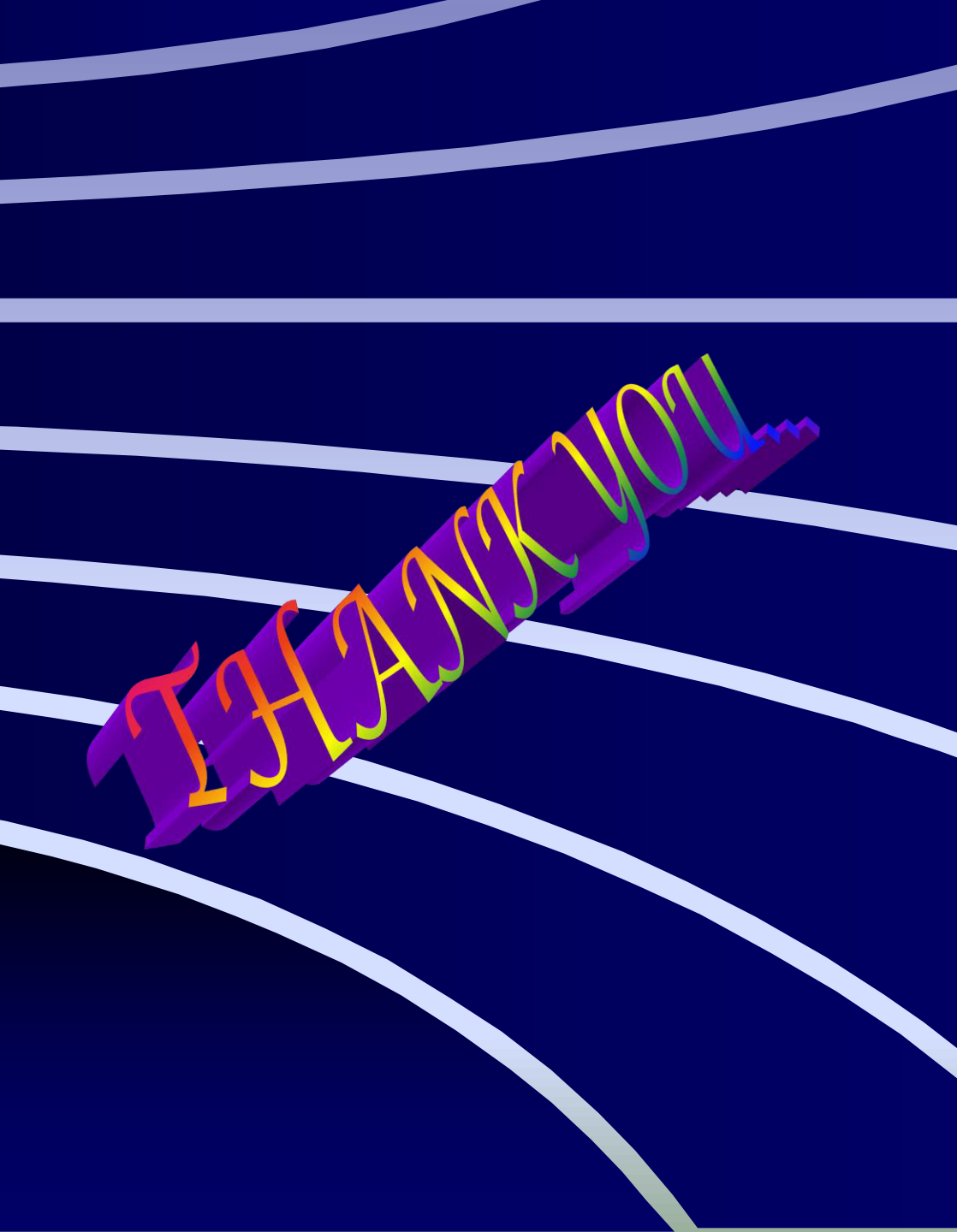
- **Well-localized disease should be treated with resection (surgery) followed by radiotherapy or chemotherapy.**
- **Extensive disease by adjuvant chemotherapy & radiotherapy than surgery.**

## ■ Leiomyosarcoma:

- Arise in the stomach representing 1% of gastric tumors.
- They may be sessile or pedunculated projecting into the gastric lumen or extragastrical or both (dumb-bell tumour).
- Presentation due to blood loss anaemia or epigastric mass or vague dyspepsia.
- Malignancy is suggested by the size more than 5cm and confirmed by noting increased mitosis on histology.

## ■ Gastric Carcinoid Tumour:

- Are very rare. There is established association between atrophic gastritis & carcinoid & pernicious anemia.
- Gastric carcinoids are best treated by local resection. If very small by endoscopic resection.



THANK YOU

