

## Esophageal Tumors – Dr. Taha

- Malignant > common than benign.
- Unfortunately, eso cancer discovered late & overall 5 year prognosis is bad < 10.
- Even for potentially resectable ca eso, 5 y survival is < 30%

### Benign Neoplasms

- The most common is a gastrointestinal stromal tumour (GIST, another name for leiomyoma), usually asymptomatic but may cause bleeding or dysphagia
- Uncommon, include fibrovascular polyps, leiomyomas, papillomas, lipomas, neurofibromas, granular cell tumors.
- When large, can cause dysphagia or chest pain from obstruction or stretch.
- Usually discovered incidentally.

### Leiomyoma of Oesophagus

- Most common benign tumor of esophagus & small bowel but not common in the colon
- Usually asymptomatic
- May produce dysphagia or hematemesis if large.
- Typically occurs in young males
- Found most often in distal third of esophagus.
- Usually solitary, but may be multiple (3%).
- Imaging findings:
  - Smooth, sharply-marginated mass.
  - Well-defined, intramural (wall) mass & may narrow the lumen.
  - May have coarse calcifications (only calcifying esophageal tumor)
  - Rarely ulcerates
- Diagnosis:
  - Barium swallow.
  - Endoscopy: smooth submucosal lesion.

### Carcinoma of Esophagus

#### Etiology & Pathogenesis

- Almost all are adenocarcinoma or squamous cancers.
- Small-cell cancer is a rare third type.

### Squamous Cell Carcinoma (SCC)

- In West relatively rare (4 cases /100 000), in Iran, Iraq Africa , China, common (200/100 000).
- Can arise in any part of the oesophagus from the post-cricoid region to the cardia.
- Almost all tumours above the lower third of the oesophagus are squamous cancers.

#### SCC: Etiology & Pathogenesis

- > in men than women 3-4:1.
- Relatively common in Kurdistan.
- Should be considered in any case presenting with dysphagia.

## SCC: Risk factors

- Alcohol.
- Tobacco smoking.
- SCC of the head & neck.
- Lye or post-caustic strictures
- Achalasia.
- Papilloma virus infection.
- Plummer-Vinson syndrome
- Tylosis (familial hyperkeratosis of palms & soles) .
- Celiac disease.
- Radiation exposure.
- Post-cricoid web

## SCC: SYMPTOMS

- The most common is progressive dysphagia over a several-month period until only liquids can be taken.
- The obstruction does not occur until the cancer is far advanced.
- The dysphagia may be accompanied by a steady, boring pain, which often signals mediastinal involvement & inoperability.
- Unexplained persistent chest pain should always be investigated by a careful double-contrast Barium or endoscopy.
- More advanced; halitosis & weight loss.
- Coughing after drinking fluid may be caused either by nearly complete esophageal lumen obstruction, with overspill into the larynx, or by the development of a tracheoesophageal fistula.
- Hematemesis & Hoarseness from involvement of the recurrent laryngeal nerve by tumor are unusual symptoms.

## SCC: SIGNS

- Weight loss.
- Nail bed clubbing can be seen with both benign & malignant tumors.
- Vricho's node in left supracalvicular region.
- Early diagnosis affords the only chance for cure.

## DIAGNOSIS

- The investigation of choice is upper GI endoscopy with cytology & biopsy.
- A barium swallow demonstrates the site& length of the stricture but adds little useful information.
- Once a diagnosis has been achieved, investigations are performed to stage the tumour& define operability.
- Thoracic & abdominal CT are carried out to identify metastatic spread & local invasion.
- Invasion of the aorta&other local structures may preclude surgery.
- Unfortunately, CT tends to understage tumours &the most sensitive modality is EUS to define the TNM stage.
- Dysphagia needs immediately double-contrast Barium.
- Any irregularity, esp if it narrows the lumen, mandates further evaluation.
- A bolus of barium-soaked bread may discover any possible sites of arrest.
- In the presence of suspicious symptoms & normal barium swallow results, endoscopy with biopsy & brushing of any suspicious lesion is indicated.
- The endoscopist should always obtain a good retroflexed view of the cardia from below, to make certain that an adenocarcinoma in GEJ has not been overlooked
- If narrowing detected by barium swallow, endoscopy with biopsy & cytologic brushings of the involved area is required.
- Biopsy of visible tissue may reveal only inflammation; so as many as 6-9 deep biopsy specimens should be obtained.

## STAGING

- Evaluation for local tumor spread, mediastinal nodal involvement & liver metastases is essential for staging before a therapeutic decision is reached by:
- Physical examination for lymphadenopathy
- Tests of liver enzymes
- Chest radiography.
- CT scan.
- For upper & mid-esophageal tumors, bronchoscopy is indicated to evaluate for asymptomatic invasion of the tracheobronchial tree.
- Endoscopic ultrasound (EUS) is useful to detect the level of invasion & presence of mediastinal lymph node abnormalities & is becoming the favored test to determine if a lesion is resectable.

## TREATMENT

- Choice of therapy depends on:
  - Location
  - Size
  - Presence or absence of spread.
  - Cell type.
- Surgical resection of SCC & adenocarcinoma of the lower 1/3 is preferred unless widespread metastases present.
- Surgery offers the benefit of rapidly restoring esophagogastric continuity.
- Only 1/4 have a resectable tumor; of these, 10 - 20% do not survive the operative period.
- 5-year survival is only 5 - 20%, even with extensive resection.
- Long-term survival cannot be predicted in the individual case by the operative findings.
- There is growing enthusiasm for palliative resection with restoration of GI continuity with stomach or colon.
- Radiation therapy +/- surgery or chemotherapy has been a mainstay for SCC, but adenocarcinomas are relatively radioinsensitive.
- Radiotherapy has little hospital mortality, but some short-term & long-term morbidity.
- Patients treated with definitive radiation therapy (50 to 80 Gy) alone have a 1-year survival of 18-40% & a 5-year survival of 6-14% dependent on the initial stage.
- Chemotherapy with cisplatin-containing combinations has demonstrated objective tumor response.
- Multimodality treatment with radiation + chemotherapy with cisplatin - fluorouracil is superior to radiation therapy alone.
- When obvious extraesophageal spread is present, palliation may be achieved with bougienage dilation +/- Endoscopic metallic stenting to restore & maintain an adequate esophageal lumen.
- If performed with a guide wire under fluoroscopic guidance, is not hazardous in skilled hands.
- If dilation does not offer lasting relief, then a Silastic tube or metal stent can be placed perorally to relieve esophageal obstruction & greatly beneficial in treating malignant tracheoesophageal fistula.
- Destruction of intraluminal tumor & restoration of an adequate lumen may be performed by endoscopic laser therapy, intraluminal heat-coagulating probe, or photodynamic therapy.
- Despite modern treatment, the overall 5-year survival of oesophageal cancer is 6-9%.
- Survival following oesophageal resection depends on stage.

- Tumours which have extended beyond the wall, have lymph node involvement (T3, N1) are associated with a 5-year survival of around 10% after surgery.
- Without LNs, Overall survival following 'potentially curative' surgery (all macroscopic tumour removed) is about 30% at 5 years & can be improved by neoadjuvant (pre-operative) chemotherapy with agents as cisplatin/ 5-fluorouracil.
- Although SCC are radiosensitive, radiotherapy alone is associated with a 5-year survival of only 5%.
- 70% have extensive disease at presentation; in these, treatment is palliative & based upon relief of dysphagia & pain.
- Endoscopically directed tumour ablation using laser therapy or insertion of stents is the major method of improving swallowing.
- Palliative radiotherapy may induce shrinkage of both SCC/ adenocarcinomas but symptomatic response may be slow.
- Quality of life can be improved by nutritional support / appropriate analgesia.

## **ADENOCARCINOMA**

- Arises in the lower third of the oesophagus from Barrett's oesophagus or from the cardia of the stomach.
- The incidence is increasing & now 5:100 000 in UK; possibly because of the high prevalence of GERD/ Barrett's.
- A rapid rise in adenocarcinoma, particularly in white men, has made their current cancer rates about equal.
- Unlike SCC, arise in the distal esophagus because of the presence of Barrett's eso, a complication of GERD.
- Lymphatic spread is common.
- Adenocarcinomas are radio insensitive; although chemoradiation & surgery may improve survival, the 5-year survival < 10% almost equal to SCC.
- Palliation is the same as for inoperable SCC.