ESOPHAGEAL CANCER

BASIC INFORMATION

Oesophageal cancer is the sixth most common malignancy in the world, accounting for approximately 10% of all gastrointestinal malignancies. It accounts for 4.9% (an estimated 400,000) of all cancer deaths, resulting in it being the sixth most common cause of cancer deaths. It exhibits a significant geographical variation which probably is a result of different environmental factors contributing to the etiology of the disease. The two commonest occurring histopathological types of oesophageal cancer are **Squamous Cell Carcinoma (SCC) and Adenocarcinoma (AC).**

Squamous Cell Carcinoma mostly affecting the upper two-thirds of the oesophagus arises from the squamous epithelial lining of the oesophagus with smoking, alcohol consumption, oesophageal dysfunctions (achalasia, Plummer-Vinson syndrome), dietary deficiencies, celiac disease, lye strictures and ingestions (hot beverages, pickled or fermented foods) as associated risk factors in its development. Adenocarcinoma tends to be localized in the lower part of the oesophagus and gastro-oesophageal junction and is known to arise from pre-existing Barrett's columnar metaplasia. In the past decades, the incidence of SCC has remained stable with its decline occurring in some parts of the world. Adenocarcinoma on the contrary, has increased dramatically especially in the United States and Western Europe.

WHAT CAUSES ESOPHAGEAL CANCER ???

1. **Tobacco consumption (Smoking or Chewable)**
2. **Alcohol consumption.**
3. Dietary Deficiancies of Vitamin A,C & E, Selenium, Fiber, Carotenoids.
4. Obesity
5. Lack of Physical Activity.
6. **GERD (Gastroesophageal Reflux Disease).**
7. H.Pylori Infection.
8. **Barrett's Esophagus.**

PRESENTING SYMPTOMS

1. **Dysphagia (Difficulty in swallowing)** – most common presenting symptom. Initially is swallowing solids and later to liquids.

Less Common Symptoms

2. Odynophagia (Painful Swallowing)
3. Cough, Hoarseness, Weight Loss, Breathlessness and Retrosternal Pain.

HOW TO DIAGNOSE IT????

The staging of oesophageal cancer at diagnosis is pivotal to the appropriate selection of treatments. Early stage disease is amenable to surgical resection with curative chemoradiation applicable to patients not fit for surgery. As survival rates can be as high as 90% in patients with early disease, ascertaining the true extent of the oesophageal cancer becomes vital. Locally advanced disease can be treated with neoadjuvant regimens (chemotherapy or combined chemoradiotherapy) administered prior to surgical resection which facilitate downsizing of the tumour and improve rates of complete resection. In this scenario, identifying regional nodal involvement and the extent of advanced disease is important in selecting the most suitable neoadjuvant treatment for the oesophageal cancer. Proper identification of metastatic disease prevents the patient from receiving futile treatments that carry significant morbidity and mortality; allowing the patient to receive care that would ameliorate symptoms and improve quality of life.

Various diagnostic and staging modalities are used for correct diagnosis and staging of esophageal cancer.

1. **Endoscopy + Biopsy** – This confirms the diagnosis of Esophageal Cancer as well as confirms the location of tumour.
2. **CT Scan of Chest & Abdomen with IV Contrast –** Helps in staging the local disease.
3. **Whole Body FDG PET-CT SCAN -** Now considered as the gold standard for staging as well response assessment to treatment in Esophageal Cancer.

WHAT ARE THE TREATMENT OPTIONS???

EARLY STAGE

SURGERY – Surgical removal of tumour with complete Esophagus and replacing it with Stomach tube is the standard line of treatment for early stage cancer. The surgery can be performed in **Conventional open surgery or in Minimal Invasive Surgery (Laparoscopic or Robotic)** techniques.

Nowadays with advances in MIS, it is considered as the preferred modality of surgery. With MIS techniques the **Post-operative lung complications, blood transfusions, hospital stay and wound infections can be minimised with equal oncological outcome** as compared to conventional open surgery.

CHEMORADIATION – Chemoradiation as primary modality of treatment in early stage disease is reserved only for patients not fit for surgery.

LOCALLY ADVANCED STAGE

CHEMORADIATION – Chemoradiation is the primary modality of treatment for locally advanced disease to downstage the tumour and control the micrometastasis.

With the recent Radiation technologies like IMRT & IGRT, the side effects of conventional radiation have been minimised.

Chemotherapy is given in weekly doses along with radiation.

SURGERY – Surgery is performed after 4-6 weeks of completion of Chemoradiation after re-assessment with PET CT Scan.

METASTATIC (ADVANCED) STAGE

Treatment intention at this stage is mainly palliative in the form of Palliative Chemotherapy and best supportive care for the patient in the form of Esophageal Stents, Pain Management and End of life care.

WHAT ARE THE SURVIVAL RATES??

5-year survival rates drop from 37.3% without nodal disease to 18.4% with nodal disease, with the worst survival of 3.1% noted in patients with metastatic disease (SEERS data).

As a result, detection of oesophageal cancer and the extent of the underlying disease make staging a crucial aspect in prognosis.