

Update on Oesophageal Cancer

Text by Dr Aung Myint Oo @ Ye Jian Guo

In line with Oesophageal Cancer Awareness month in April, SMA organised a webinar on 9 April 2022 titled "Update on Oesophageal Cancer" for primary healthcare professionals, supported by Bristol Myers Squibb. A total of 104 clinicians attended the webinar.

The details of the programme are as follows.

2 pm	Welcome
2.10 pm	Endoscopic diagnosis and management Dr Stephan Tsao Senior Consultant, Department of Gastroenterology, Tan Tock Seng Hospital
2.40 pm	Surgical management Dr Aung Myint Oo @ Ye Jian Guo Senior Consultant, Department of General Surgery, Tan Tock Seng Hospital
3.10 pm	The emerging role of immunotherapy in oesophageal cancer Dr Choo Su Pin Medical Oncologist, Curie Oncology
3.40 pm	Role of radiotherapy Dr Ivy Ng Associate Consultant, Department of Radiation Oncology, National University Cancer Institute, Singapore
4.10 pm	Perioperative nutrition Ms Serene Chew Senior Dietician, Tan Tock Seng Hospital
4.40 pm	Closing

I share in this article some general information on multidisciplinary management of oesophageal cancer for my fellow colleagues' reference.

Incidence

According to GLOBOCAN 2020, oesophageal cancer is the seventh most common cancer in men and the 13th most common cancer in women. Men are three to four times more likely to get oesophageal cancer than women. A total of 604,100 (3.1%) of patients were diagnosed with oesophageal cancer worldwide in 2020, of which 79.7% were from Asia.

It is the sixth most common cause of cancer death worldwide. 5.5% (5,444,076) of all cancer deaths in 2020 are due to oesophageal cancers, of which Asia contributed 79.8%.^{1,2} In 2020, Singapore reported 234 new cases of oesophageal cancers reported, and 220 patients with oesophageal cancer died of it.³

The majority of oesophageal cancer cases are either adenocarcinomas (AC) or squamous cell carcinomas (SCC). Even though the incidence rate of SCC has been decreasing lately, the incidence rate of AC arising from Barrett's oesophagus has risen dramatically over the years.

Risk factors

An increased risk of oesophageal cancers is associated with some hereditary conditions, namely Peutz-Jeghers syndrome and phosphatase and tensin homolog (PTEN) hamartoma tumour syndrome (PHTS) type Cowden Syndrome.

The major risk factors for SCC are smoking, alcohol consumption, consumption of extremely hot beverages,

poor nutritional status, low intake of fruits and vegetables, human papilloma virus infections, history of head and neck cancer, prior radiotherapy, and history of caustic injury to the oesophagus.

The major risk factors for AC include Barrett's oesophagus, gastroesophageal reflux diseases, a high body mass index, and low intake of fruits and vegetables.^{4,5}

Presenting symptoms

The most common presenting symptoms are progressive dysphagia and weight loss.

Sometimes, patients might present with heart burn and associated chest pain, hoarseness of voice, chronic cough, regurgitation of food, and bleeding upper gastrointestinal tract. For those patients with metastasis to bone, symptoms include bone pain as well.⁶

Diagnosis and staging

The establishment of the diagnosis is by oesophagogastroduodenoscopy (OGD) and biopsy. OGD can confirm the early or advanced stage of the tumour in addition to the tumour location. Biopsy can confirm whether the tumour is SCC or AC. As the overall missed rate of oesophageal cancer, especially the early stage lesion, is 6.4% to 7.8% according to the literature, it is important to examine the mucosa thoroughly, including the application of image-enhanced endoscopy.

Once the diagnosis is confirmed, the staging of cancer can be performed by endoscopic ultrasound, CT scan, and integrated positron emission tomography and CT scan. According to the American Joint Committee on Cancer,⁷ gastro-oesophageal junction (GEJ) tumours with an epicentre no more than 2 cm

into the proximal stomach are staged as oesophageal cancer. Staging or diagnostic laparoscopy and peritoneal washing can be considered for those GEJ tumours or abdominal oesophageal cancers if there is any suspicion of intraperitoneal metastasis that cannot be otherwise confirmed. If there is any suspicion of airway involvement in thoracic oesophageal tumours, bronchoscopy can be performed.

Management

Management of the oesophageal cancer depends on the curability, resectability, patient fitness for surgery, location and the stage of the tumour.

For very early stage mucosal lesions, endoscopic mucosal resection (EMR) or endoscopic submucosal dissection (ESD) with or without ablation can be considered for suitable patients. If EMR and ESD are not feasible or there are low-risk T1b to T2 lesions, upfront surgery (oesophagectomy) can be considered if the tumour is non-cervical oesophagus. For high-risk lesions or advanced stage cervical oesophageal cancers, patients who are not surgical candidates or refused surgery, and surgically unresectable advanced stage patients, definitive chemoradiation (concurrent chemotherapy with radiation therapy of 50.4 Gy in 28 sessions) can be considered. For patients with locally advanced but operable, resectable conditions, neoadjuvant concurrent chemoradiation as per CROSS trial⁸ (radiotherapy of 41.4 Gy in 23 fraction, and chemotherapy course of paclitaxel 50 mg/m² weekly with carboplatin AUC 2 mg/ml per minute) can be considered, followed by restaging and surgery.

Preoperative nutritional optimisation and prehabilitation are also very important to achieve excellent post-operative outcomes. Minimally invasive oesophagectomy (thoracoscopic and laparoscopic or robot-assisted) has proven to have better post-operative outcomes compared to open surgeries. For patients with intrathoracic oesophageal cancers (SCC or AC), the three incisional oesophagectomy (McKeown oesophagectomy) with radical lymphadenectomy is recommended. For patients

with intra-abdominal oesophageal cancer (AC) or gastroesophageal junctional cancer with an epicentre less than 2 cm into the proximal stomach, the two incisional oesophagectomy with radical lymphadenectomy (Ivor-Lewis oesophagectomy) or transhiatal oesophagogastrectomy with lower mediastinal radical lymphadenectomy can be considered if tumour invasion is less than 4 cm into the lower oesophagus.

For patients with a metastatic disease, palliative chemotherapy, radiation therapy, immunotherapy or best supportive care can be considered.

With the advancement of immunotherapy research in oesophageal cancer, the US Food and Drug Administration has approved the use of pembrolizumab and nivolumab in the management of advanced and metastatic oesophageal and gastroesophageal junctional cancers.⁹

Prognosis

With the advancement of minimally invasive surgery, post-operative care, chemotherapy, radiation therapy and immunotherapy, the survival rate of oesophageal cancer has improved over the years. Overall five-year survival rate is 20%, and the survival rate can increase to 46% if the tumour is localised. For advanced stage tumours with regional lymph nodes involvement, the survival rate is up to 26% while metastatic disease survival is 5%.^{10,11}

Conclusion

Even though it is relatively uncommon, oesophageal cancer is still one of the top ten leading causes of cancer deaths worldwide, especially in Asia and Singapore. Most oesophageal patients are diagnosed at an advanced stage as symptoms of progressive dysphagia only happens when the tumour is big enough. If diagnosed early, endoscopic treatment is feasible with good outcomes. Minimally invasive oesophagectomies have proven to be superior to the conventional open surgeries in suitable patients due to fewer pulmonary complications. With

multidisciplinary management of oesophageal cancers, perioperative morbidity and mortality can be improved with better overall outcomes and disease-free survival. ♦

References

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Dr Aung is a senior consultant surgeon in the Department of General Surgery and an Assistant Chief Medical Informatics Officer in Tan Tock Seng Hospital, Singapore. He is also Chairman of the Chapter of General Surgeons, College of Surgeons, Academy of Medicine, Singapore.