

Oesophagectomy 食道切除手術

Introduction

Oesophagus is a tubular structure in the upper gastro-intestinal tract that links up the hypopharynx in the neck to the stomach in the abdominal cavity. Anatomically, most of the oesophagus is located within the thoracic cavity. Closely related to the oesophagus are many vital structures and these include the followings:

1. Trachea and the bronchi
2. Pericardium and the heart
3. Great vessels
 - Aortic arch
 - Descending aorta
 - Major veins like hemizygous / azygous veins

Indications

Oesophagectomy (ie. resection of the oesophagus) is mainly performed for malignancy of the oesophagus which is still a relatively common cancer in our locality. Occasionally, oesophagectomy is also indicated in benign condition like perforation and non-malignant narrowing (eg. Corrosive stricture)

Reconstruction

Following oesophagectomy, the stomach is the organ of choice to be pull-up to regain the continuity of the gastro-intestinal tract. However, in selected cases, a segment of the large bowel is required to work as the conduit for reconstruction.

The Procedures

Conventionally, oesophagectomy includes three phases:

1. Surgical resection of the oesophagus with regional lymph nodes.
2. Mobilization of the stomach keeping with it the blood supply
3. Anastomosis to maintain the continuity

Open surgical approach results in incisions over abdomen, chest and perhaps, neck as well. Nowadays, laparoscopic and thoracoscopic dissection can be performed as minimal invasive procedures. However surgery may be converted from minimal invasive approach to open surgical approach if the dissection is considered to be too difficult or unsafe.

Anesthesia

The operation is carried out under general anesthesia with selective ventilation of the lungs. Epidural anesthesia or patient-control-anesthesia is frequently applied to reduce post-operative pain in view of the thoracotomy wound.

Surgical Risks

Oesophagectomy is an ultra-major operation that takes at least 5-6 hours to be completed. Post-operative intensive care is absolutely indicated. Specific complications related to oesophagectomy include:

1. Intra-operative bleeding in view of the extensive field of dissection and the nearby major vessels.
2. Injury to surrounding structure e.g. lungs, trachea or recurrent laryngeal nerve
3. Anastomotic leakage because of tension to anastomosis and / or impaired blood supply
4. Chylothorax as a result of damage to lymphatic system
5. Chest infection / pneumonia
 - Majority of the patients are heavy smokers with poor ventilatory function. The thoracotomy wound and single lung ventilation further impair the pulmonary recovery. Indeed, sputum retention and chest complication is still one of the most likely causes of surgical failure.
6. Late complication – anastomotic stricture, tumor recurrence
7. Mortality

Peri-operative Preparation

1. Optimize pulmonary function
 - Stop smoking
 - Treat existing chest infection if any
 - Vigorous breathing and coughing exercise
2. Nutritional support
 - Enteral feeding, either oral feeding or nasogastric tube feeding, is encouraged if possible, otherwise
 - Parental nutrition is seriously considered

After surgery, ICU care for ventilatory support and monitoring is the routine practice. Early ambulation and early oral feeding is advisable depending on the progress of recovery.

Follow up

1. See the doctor as scheduled
2. In case there are any serious conditions such as severe wound pain, passage of large amount of blood, fever, etc, you should seek medical attention at the Accident and Emergency Department of a nearby hospital.

Remarks

Oesophagectomy is the mainstay of treatment for cancer of the oesophagus that is not disseminated and in patients who are medically fit. Nowadays, tri-modality therapy is commonly arranged in stage 2-3 cancer for better control of the disease.

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor.