Dysphagia Lusoria / Bayford-Autenrieth dysphagia

DEFINITION

- Is abnormal condition characterized by difficulty in swallowing caused by aberrant right subclavian artery.

PATHOPHYSIOLOGY

- During development of aortic arch, if the proximal portion of the right fourth arch disappears instead of distal portion, the right subclavian artery will arise as the last branch of aortic arch instead of arising from brachiocephalic artery.
- Aberrant origin of right subclavian artery is the commonest aortic arch anomaly in adults and occurs in approximately 0.4 to 1% of the population.
- It then courses behind the esophagus (or rarely in front of esophagus, or even in front of trachea) to supply blood to right arm. This causes pressure on esophagus and results in dysphagia. It can sometimes result in upper gastrointestinal tract bleeding.

CLINICAL PRESENTATION

- Asymptomatic > Mild dysphagia >> moderate to severe dysphagia leading to nutritional problems
- In children, the most common presentations are stridor and recurrent chest infections, may be due to their tracheal softening comparing to adult population.
- Compression of the oesophagus by the aberrant right subclavian artery can be exacerbated by atherosclerosis or aneurysmal dilatation.

DIAGNOSIS

- The diagnosis of dysphagia lusoria is always difficult and late as the symptoms are often nonspecific and in the same time, diagnostic endoscopy is negative in more than 50% cases, and manometry has no diagnostic role.

RADIOGRAPHIC APPEARANCE

- Barium study of the oesophagus may show the indentation on the posterior esophageal wall by the artery.
- Chest x-ray can demonstrate enlargement of the superior mediastinum.
- CT angiography and MRI thorax are the best diagnostic modalities that could identify the arteria lusoria.

DIFFERENTIAL DIAGNOSIS

- As adult onset of dysphagia lusoria is rare, it should prompt evaluation for other reasons such as malignancy, vascular disease or gastroesophageal reflux disease (GERD)
TREATMENT

- Under GA and without an intratracheal catheter
- Anterolateral thoracotomy approach was made through the left side of the chest, entering the pleural cavity through the third interspace.
- The third and second costal cartilages are divided.
- This gives an excellent exposure of the mediastinum.
- The aortic arch is identified.
- The thymus partially dissected away and exposure was gained toward the patient's right so that the entire arch and its various branches could be adequately viewed.
- The right subclavian artery arises in an anomalous fashion from the posterior aspect of the left side of the aortic arch and then courses upward and to the right behind the esophagus the posterior wall of which is indented.
- Between this anomalous artery and the vertebral column the thoracic duct can be identified and should not be manipulated.
- The right subclavian artery was extensively liberated from its bed and was then doubly ligated and divided near the aortic arch.
- The distal portion of the artery permitted to retract to the patient's right and beyond the esophagus.
- The lung completely reexpanded and the chest appropriately closed.