Abstract:
H type tracheoesophageal fistula is a rare presentation. Three female children presented at 7-9 months of age with recurrent respiratory infections, recurrent bouts of pneumonia and failure to thrive. Investigation with bronchoscopy identified saliva in the trachea entering through the fistula in all the three cases suggesting H type tracheoesophageal fistula. For two cases cannulation of the fistulous tract was done before surgery. Through right cervical approach H type tracheo oesophageal fistula was identified and ligated in all the three cases.

Keyword: TEF H type, Failure to thrive, bronchoscopy, cannulating the fistula, ligating the fistula.

Introduction:
Three girl children presented with history of recurrent respiratory infection and recurrent pneumonia.

Case reports:

Case 1: 9 months old female child presented to our hospital with recurrent respiratory infections and choking on attempting to feed. On examination child was dyspneic and malnourished. Equal air entry was found in both lung fields and crepitations were present on the right side. Chest X ray showed bilateral pneumonic patches. Further evaluation with Bronchoscopy revealed fistula with saliva pouring into trachea (Fig 1) Fig1, bronchoscopy showing tracheoesophageal fistula.

Case 2: 7 months old female child presented with recurrent respiratory infections and recurrent pneumonia. On examination of respiratory system bilateral crepitations present. Chest X ray showed bilateral pneumonic patches. Bronchoscopy showed tracheoesophageal fistula with saliva pouring.
nto trachea Case 3: 9 months old female child with recurrent respiratory infection and choking on attempting to feed. On examination of respiratory system right side crepitations present. Child evaluated with chest X ray showed bilateral pneumonic patches and saliva pouring into trachea in bronchoscopy.

Under general anaesthesia, through right cervical approach internal jugular vein, carotid artery and recurrent laryngeal nerve safe guarded. Tracheo esophageal fistula identified, disconnection of the fistula and suturing done. (Fig 2)

In case 2 and 3 fistula was cannulated with ureteric catheter (Fig 3) for easy identification of the fistula through bronchoscopy and the other end of ureteric catheter retrieved outside via oesophagoscopy followed by through right cervical approach tracheo esophageal fistula identified and disconnected.

Interposing muscle tissue between the two opposing suture lines was done in all the three cases to avoid recurrence of the fistula. Post operatively all the three children recovered well and discharged.

Fig 2, ‘H’ type tracheo esophageal fistula

Discussion:

‘H’ type tracheo esophageal fistula is rare presentation. Incidence of 4%. Unlike oesophageal atresia with distal tracheo esophageal fistula, where there is male preponderance, H type TEF has no gender predilection. 70% will be seen at or above the level of second thoracic vertebrae. Fistula extends in oblique course from trachea to oesophagus, more anatomically accurately called the ‘N’ type.

Clinical features are choking on attempting to feed, unexplained cyanotic spells in neonates, recurrent bouts of pneumonia in right upper lobe. TEF can be suspected if chest x ray showed evidence of aspiration pneumonitis with gastric distension.

Video oesophagography done when the child in prone position, a small nasogastric tube passed into the distal end of the oesophagus and contrast medium is gradually injected as the tube is slowly withdrawn. Muhammad riazulhaq identified ‘H’ fistula in less than 24 hrs old child with oesophagogram. Bruce Benjamin diagnosed 11 cases of ‘H’ fistula using oesophagogram and endoscopy.

Fig 3, Ureretic catheter through the fistula Bronchoscopy with oesophagoscopy will confirm the diagnosis. Flore Amat has reported a case of bronchoscopic cannulation of a ‘H’ fistula in a new born. Phalla Ou diagnosed ‘H’ fistula in a 21 days old neonate using high resolution CT scan, air injected into trachea or oesophagus to delineate the fistula.
In our cases we did the surgery after cannulating in case 2 and 3. Albert tio, placed guide wire through the ‘H’ fistula with the ends brought out through the mouth. This series of three cases presented to us within a short period of two years.

BIBLIOGRAPHY:


