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## CASE REPORT

# SUCCESSFUL LATE REPAIR OF A TRAUMATIC TRACHEOESOPHAGEAL FISTULA AFTER FOREIGN BODY INHALATION

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### Abstract

**Aim:** Is to report a case of Traumatic trachea-esophageal fistula complicating long standing inhaled foreign body, which is rarely reported in the literatures and to compare it with others studies reporting similar case.

**Methods:** The details, the presentation, both clinical and radiological findings. Bronchoscopic & esophagoscopic appearances of such case are presented.

**Results:** The diagnosis was verified with contrast study and endoscopic findings .The corrective surgery was done through right thoracotomy where mobilization of the esophagus and trachea was made and the fistula was clearly demonstrate and divided and both sides were repaired with a smooth post operative outcome .

**Conclusion:** Meticulous bronchscopy and safe operator with a careful follow up is mandatory to prevent such complication and once it happened, surgery only offers the best chance of cure.

**Keywords:** Contrast study, Bronchoscopy, Esophagoscopy.

## INTRODUCTION

Traumatic tracheo – esophageal fistula secondary to long standing impacted foreign body in the trachea was rarely reported in the literature.[1,2]

Here I am presenting a case of such type of fistula secondary to an impacted shell of a pea nut in the posterior wall of the lower trachea for which repeated bronchoscopy was done .The foreign body was covered by granulation tissues .The endoscopic procedure was culminated by an established communication between trachea and esophagus.

## CASE HISTORY

A five years old female child presented to me, with recurrent Choking with water for the last four years .She gave a history of recurrent chest infection not responding to proper medical treatment, then the baby was subjected to bronchoscopic examination which revealed only granulation tissue e overlying the posterior wall of the lower trachea. The procedure was done repeatedly for four times during two years and the last one the endoscopist successfully removed a shell of a peanut from the lower part of the posterior wall of the trachea. The child continues to cough and a continuous episode of choking was reported with water intake. I was consulted by a consultant pediatrician which was

trying her effort to solve a child problem and after a full history taking, the child was subjected to contrast study of the esophagus which revealed a nice bronchogram (Fig. 1) page (9). The child then admitted for first bronchoscopy under general anesthesia during which a clear v-shaped dimple was seen in the lower posterior wall of the trachea from which saliva can be seen emerging from the opening, then immediate esophagoscopy was done which I can demonstrate clearly an opening in the anterior wall of the esophagus 15 cm from the incisor from which air can be seen to come out clearly .So the diagnosis of Tracheo-esophageal fistula was verified.

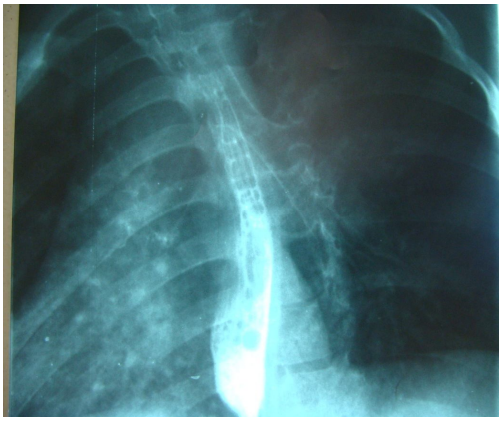

***Fig 1. Contrast study.***

The patient was prepared for right thoracotomy under antibiotic cover. Entering the chest through fourth intercostal space. Azygous vein ligated. Both the esophagus and tracheal were mobilized freed from the adhesion and clear fistula was demonstrated (Fig. 2) page (10) taking utmost care to preserve the adjacent vital structure .The fistula was divided, tracheal side was secured by single layer, non absorbable 2/0 polyester (ethibond). The esophageal side was secured by 3/0 proline interrupted single layer .The adjacent esophageal and tracheal side of the fistula was separated by a pleura fold wrapped around the esophagus.

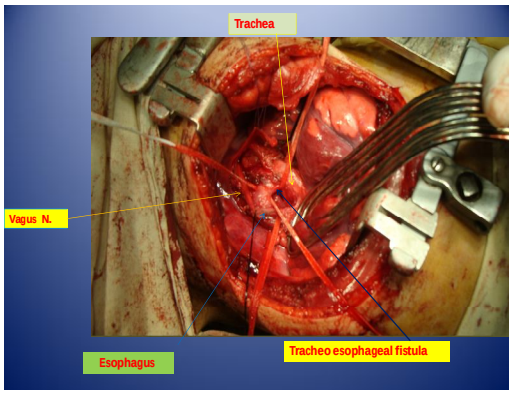


***Fig 2. Operative field.***

Hemostasis was done .Single chest tube inserted.Closure done in layers.

Post operatively, the child was kept nothing by mouth for five days and fluid and electrolyte balance was closely monitored. The child was so chesty that aggressive physio-therapy and postural drainage was instituted. On the 5th. post-operative day the oral contrast fail to demonstrated any leak (Fig. 3) page (11).

***Fig 3. Barium filling the esophagus showing no leak into the chest.***

The child started oral intake and a new chest X-Ray twenty four hours later showed a fully expanded lung and no evidence of any pleural collection, so tube thoracostomy was removed and the child discharge in a very good clinical condition with the complete disappearance of the choking episode. The child looks well nourished and active during the follow up period of six months.

## DISCUSSION

Traumatic trachea-esophageal fistula secondary to ingested foreign body into the esophagus is not uncommonly reported,[3-8] on the contrary , traumatic trachea- esophageal fistula secondary to inhaled ,impacted foreign body is rarely reported.[1,2] The pathogenesis of such cases is a local inflammation, edema, cellular infiltration, ulceration and granulation tissue formation, which will contribute to air way obstruction, the air way becomes more likely to bleed with manipulation, mediastinitis or trachea-esophageal fistulas may result.[2]

The child was maintained for a long time on antibiotics for recurrent chest infection, still just a temporary improvement happened and the child continued to suffer until there was a clear history of choking with water which attracted the attention for possible communication with the trachea. Such important history

finding necessitates a contrast study to be arranged, which was diagnostic in our patient as it was in the others.[1,2] Bronchoscopy and esophagoscopy were done on the same session, both of which disclosed clearly, the well demarcated opening in the esophagus or trachea being examined .Surgery is the only method of repairing and closing this communication as in others studies.[9,10] Pleural flap was used in our case to prevent any possible recommunication, while the use of muscle flap such as the intercostal muscle[11,12] is reported by others.

The patient went a very smooth recovery with complete absence of any choking episode thereafter.

In conclusion meticulous bronchscopy and safe operator with a careful follow up is mandatory to prevent such complication and once it happened, surgery is the only way to prevent any further complication and to offer the best chance of cure.

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