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*RESEARCH ARTICLE*

# PIONEERING HOPE: MANAGING COMPLEX TYPE C TEF IN A NEWBORN

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## *Manuscript Info*

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## *Abstract*

**Background:** Tracheoesophageal fistula (TEF) is a congenital anomaly requiring prompt diagnosis and surgical management. Type C TEF, the most common variant, poses significant challenges, especially in resource-limited settings.

**Case Presentation:** A male neonate delivered via LSCS at 39+6 weeks gestation presented with immediate respiratory distress and inability to pass an orogastric tube. Initial findings suggested Type C TEF complicated by sepsis and respiratory distress syndrome. Diagnostic investigations revealed congenital heart defects, including PDA and ASD, with elevated CRP levels indicating inflammation. The neonate underwent surgical correction on Day 2, involving fistula ligation and esophageal anastomosis. Postoperative care included antibiotics, nebulization, and supportive measures, resulting in a favorable recovery.

**Outcomes:** The neonate was discharged on Day 6 in satisfactory condition with no immediate complications. Follow-up care was advised to monitor for potential postoperative issues.

**Discussion:** Type C TEF requires a multidisciplinary approach for optimal outcomes. This case underscores the importance of early diagnosis, skilled surgical intervention, and meticulous postoperative care, even in resource-limited settings.

**Conclusion:** This report highlights the successful management of Type C TEF, emphasizing the role of timely intervention and continued follow-up to ensure long-term health and development.



## Introduction:-

Tracheoesophageal fistula (TEF) is a congenital anomaly often associated with significant morbidity and requires prompt diagnosis and surgical intervention. This report details the clinical course, diagnosis, surgical management, and recovery of a neonate with Type C TEF, admitted to a tertiary care center in rural Karnataka.

**Case Presentation:**

A male neonate, Baby of RathnaKurubara, was delivered via lower segment cesarean section (LSCS) at 39+6 weeks gestation. The birth weight was 2.56 kg, and the baby exhibited immediate respiratory distress, tachypnea, and subcostal retractions, necessitating admission to the neonatal intensive care unit (NICU). There was no cry at birth, but stimulation led to a response.

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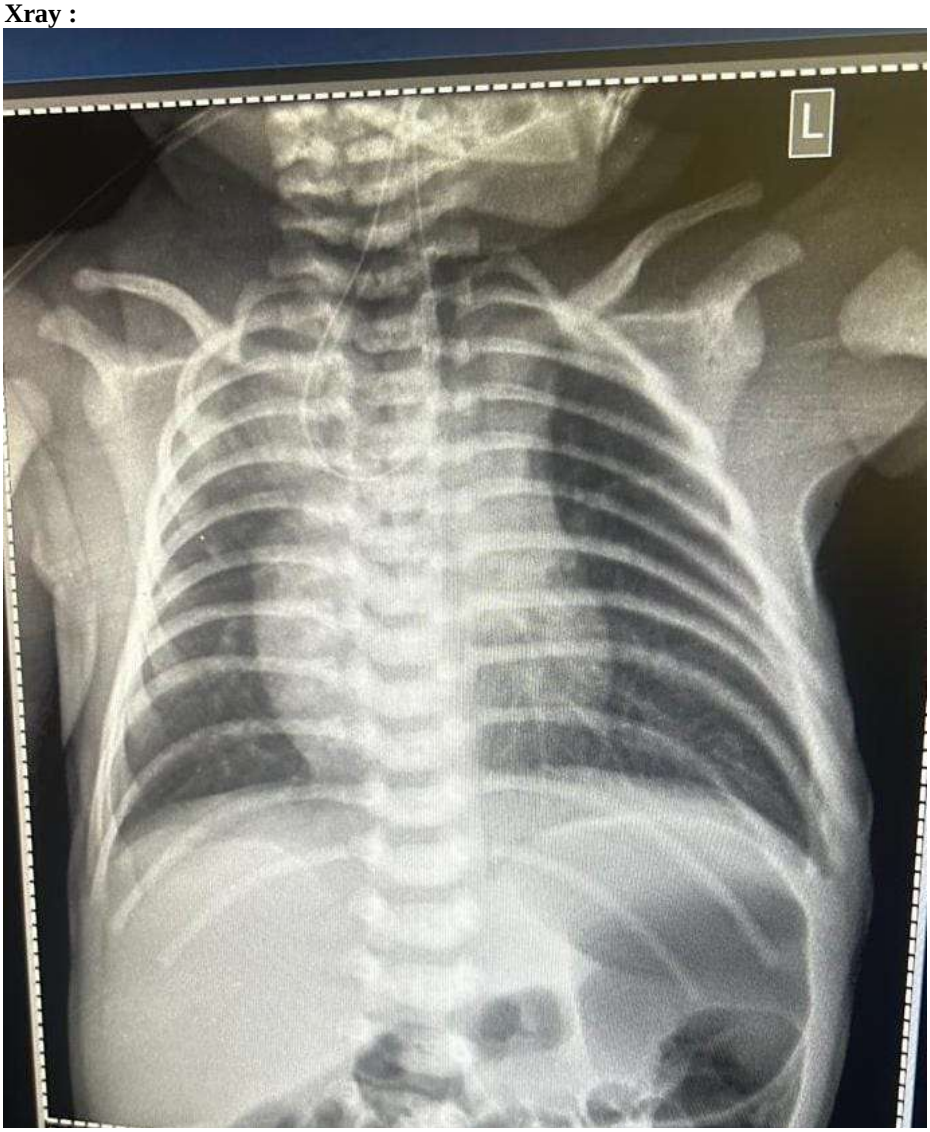
The baby was referred to our center for suspected TEF due to an inability to pass an orogastric tube. The neonate also showed signs of probable sepsis and respiratory distress syndrome (RDS), complicating the clinical scenario.

**Physical Examination:**
On admission, the baby had a respiratory rate of 54 cycles per minute and was maintaining saturation with hood oxygen. The physical examination revealed normal neonatal reflexes, pink coloration, and no external congenital anomalies.

**Investigations:**
Neurosonogram: Normal findings with no evidence of brain pathology.
Ultrasound Abdomen: No sonographical abnormalities.
2D Echocardiography: Congenital heart disease with a 3 mm patent ductus arteriosus (PDA) and 6 mm ostium secundum atrial septal defect (ASD).

Laboratory results indicated elevated C-reactive protein (CRP), suggestive of inflammation.
**Pre Operative Xray :**



**Therapeutic Intervention:**
On Day 2, the neonate underwent right posterior lateral thoracotomy, esophageal fistula ligation, and anastomosis with intercostal drain (ICD) placement under general anesthesia. The surgical procedure was uneventful, and the baby was shifted back to the NICU for postoperative monitoring.

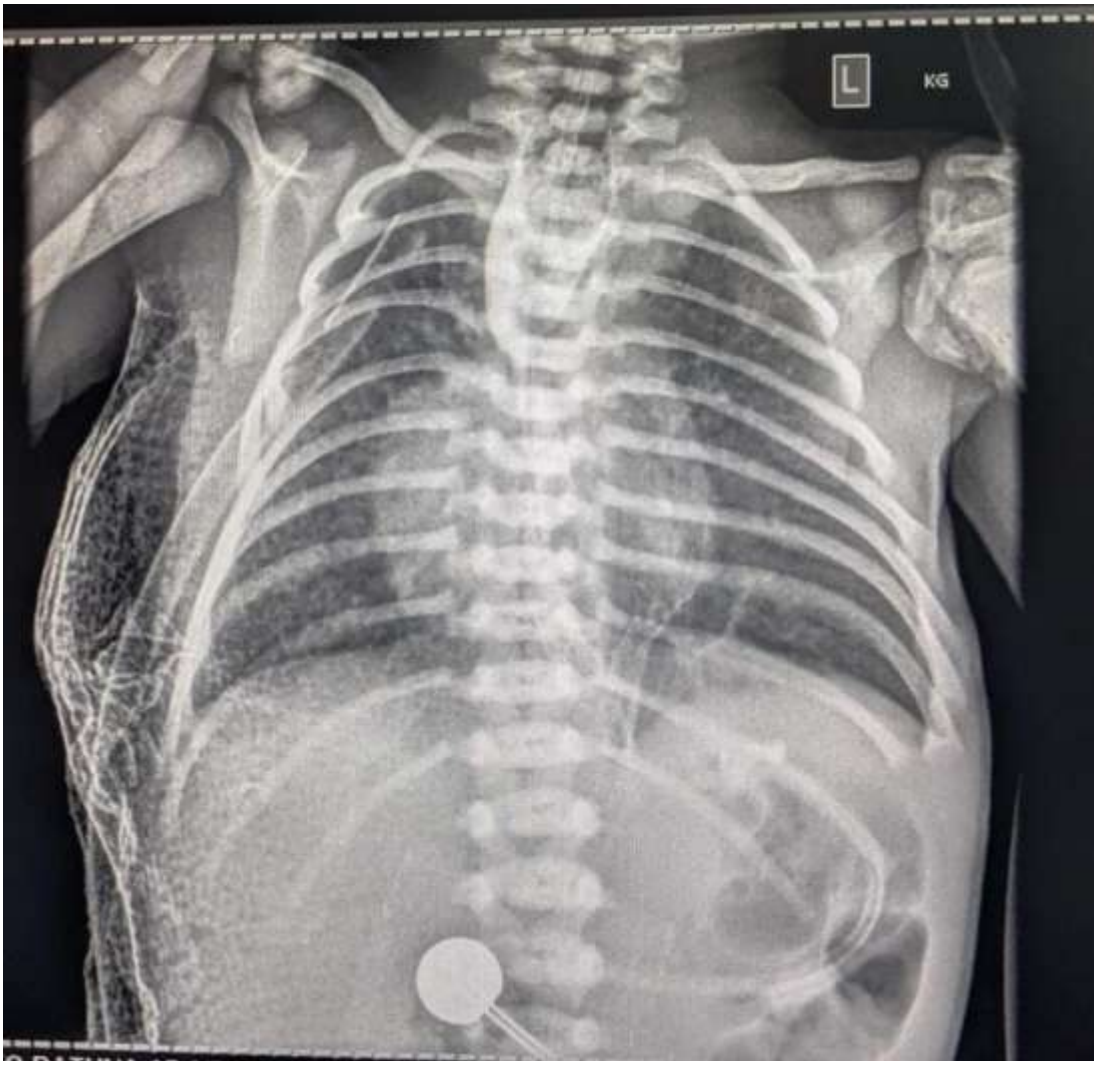
Postoperatively, the neonate was managed with intravenous antibiotics (Meropenem, Taxim, and Amikacin) and supportive care, including nebulization with Asthalin and Mucomist. The baby showed gradual improvement, maintaining oxygen saturation on minimal ventilator support.

**Hospital Course:**
The baby remained hemodynamically stable during the hospital stay. CRP levels decreased post-treatment, and no further signs of sepsis or inflammation were noted. Feeding was gradually initiated once the baby stabilized.

The neonate was discharged on Day 6 postoperatively in satisfactory condition with the following advice:

**Keep the baby warm.**
2 ) Initiate feeding as tolerated.
3)Continue prescribed antibiotics and nutritional supplements.

Follow up in the pediatric outpatient department after one week.



## Discussion:-

Type C TEF, characterized by a proximal esophageal pouch and distal tracheoesophageal fistula, is the most common variant of TEF. Prompt diagnosis using clinical signs and imaging, followed by surgical correction, is critical for favorable outcomes. Our case emphasizes the importance of a multidisciplinary approach in managing neonatal TEF, especially in resource-limited settings.

Postoperative complications like anastomotic leaks, strictures, and recurrent fistulas are significant concerns. However, our patient exhibited an excellent recovery with no immediate postoperative complications.

## Conclusion:-

This case highlights the successful management of Type C TEF in a neonate, emphasizing the role of early diagnosis, surgical intervention, and meticulous postoperative care. Regular follow-ups remain crucial to monitor for potential complications and ensure optimal growth and development.

## References:-

1. Here are five suggested references that you can include in your case report. You can verify the specific citation style (e.g., APA, Vancouver) required by your target journal and format accordingly.
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